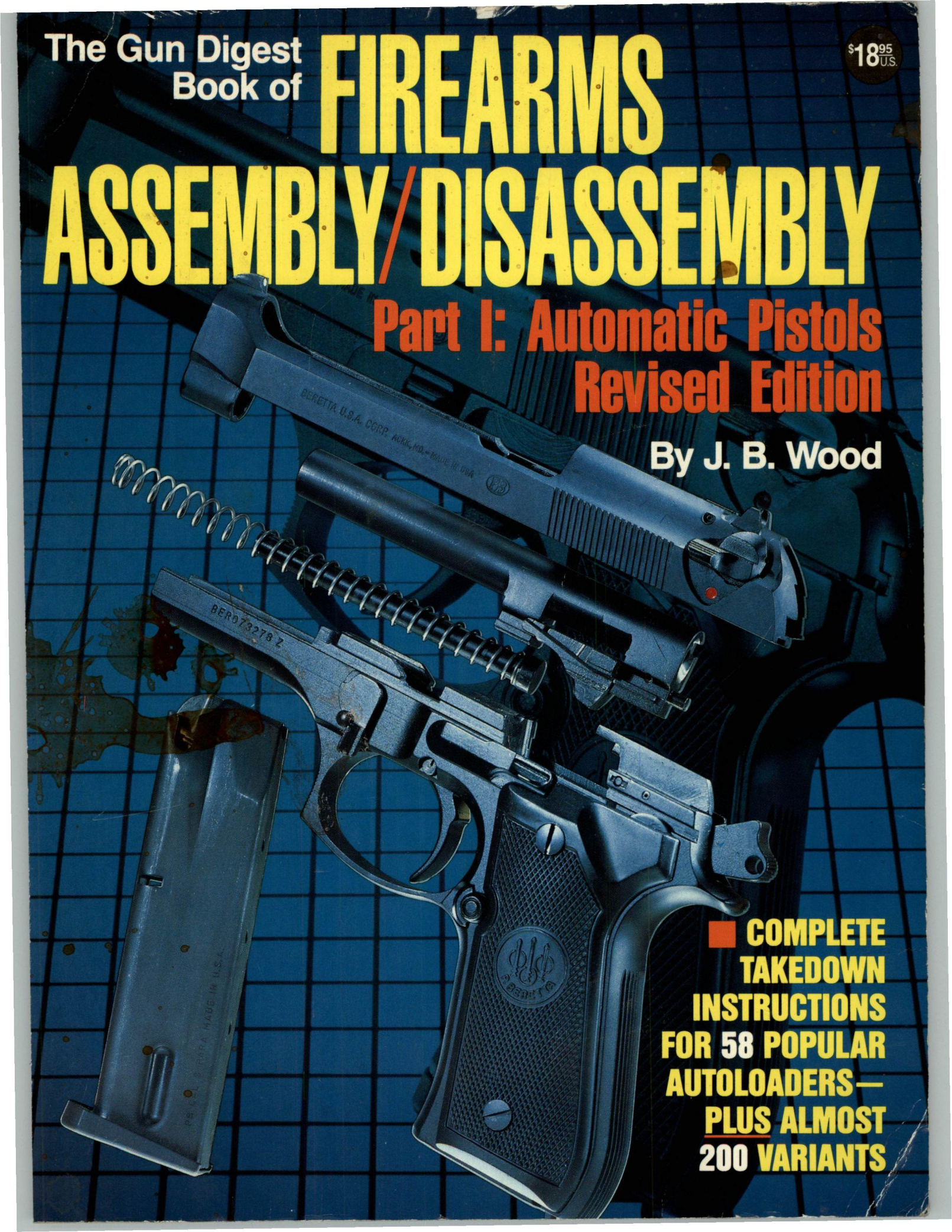
The Gun Digest Book of

FIREARMS ASSEMBLY/DISASSEMBLY

Part I: Automatic Pistols Revised Edition

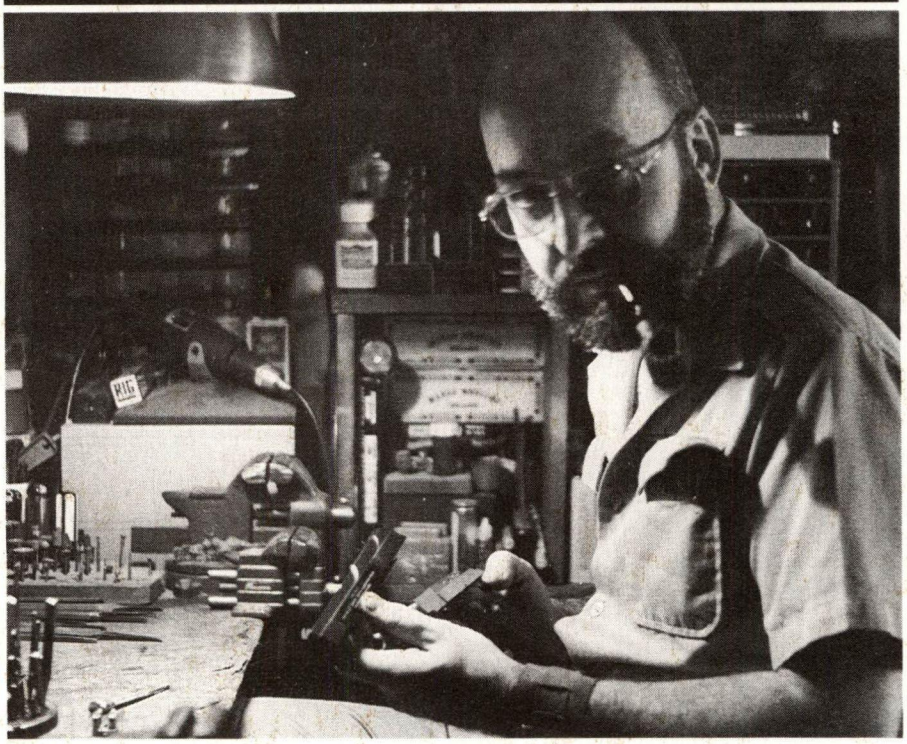
By J. B. Wood



$18.95 U.S.

- COMPLETE TAKEDOWN INSTRUCTIONS FOR 58 POPULAR AUTOLOADERS—PLUS ALMOST 200 VARIANTS

About the Author



Guns, especially automatic pistols, have always been a part of J.B. Wood's life, and it has now been more than 40 years since he began working as a gunsmith. Fortunately, Wood has been able to combine his mechanical talents with writing about them, which he's been doing since 1962. In that time he has had more than 800 articles published in *Gun Digest, Guns Illustrated* and in most of the monthly gun magazines. In 1977-1978 he authored a two-book series for DBI Books, *Troubleshooting Your Handgun* and *Troubleshooting Your Rifle and Shotgun*. From 1979 to 1981, Wood wrote and photographed the original six-part *Firearms Assembly/Disassembly* series, a monumental task that turned out to be the best reference ever printed on the subject at hand. Currently, he is revising the series to include recently introduced guns and more guns for which detailed takedown and reassembly instructions may no longer exist.

In 1974, J.B. Wood began a regular monthly relationship with gun magazines. He was Gunsmithing Editor for *Guns & Ammo* magazine for 8 years, is Contributing Editor to *Gun Digest* and *Combat Handguns*, and is currently Gunsmithing Editor for *Shooting Times* magazine. Because he is so well briefed on firearms in general, and self-loading pistols in particular, Wood is considered an international authority, and has testified in many court cases involving firearms as an expert witness. In addition, he has done mechanical design and redesign work for a number of domestic and foreign arms makers. Currently, he is a full-time gunsmith, writer, and firearms consultant and lives in rural Kentucky.

90000
9 780873 491020
ISBN 0-87349-102-5

The Gun Digest Book of FIREARMS ASSEMBLY/ DISASSEMBLY

Part I Automatic Pistols, Revised

by J.B. Wood

DBI BOOKS, INC.

Editorial Staff:

Editor
Harold A. Murtz
Electronic Publishing Manager
Diane Mansfield
Cover Photographer
John Hanusin
Managing Editor
Pamela Johnson
Publisher
Sheldon L. Factor

Copyright © MCMLXXIX and MCMXC by DBI Books, Inc., 4092 Commercial Ave., Northbrook, Ill. 60062. All rights reserved. Printed in the United States of America. No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

The views and opinions of the author expressed herein are not necessarily those of the publisher, and no responsibility for such views will be assumed.

In regard to the mechanical and safety aspects of the guns covered in this book, it is assumed that the guns are in factory original condition with the dimensions of all parts as made by the manufacturer. Since alteration of parts is a simple matter, the reader is advised to have any gun checked by a competent gunsmith. Both the author and publisher disclaim responsibility for any accidents.

Arms and Armour Press, London, G.B., exclusive licencees and distributors in Britain and Europe, New Zealand, Nigeria, So. Africa and Zimbabwe, India and Pakistan, Singapore, Hong Kong and Japan. Capricorn Link (Aust.) Pty. Ltd. exclusive distributors in Australia.

ISBN 0-87349-102-5
Library of Congress Catalog Card # 79-54271

This book is dedicated to my children—Lark Lynne, Heather Lea, Ethan Allen, Nathan Hughes and Michael Paul

Acknowledgements

I would like to thank these people for their help in supplying some of the guns used in this book.

John Yarger and Jim Yarger of the Lock & Load Gun Shop, Glenn Lancaster, Gene Wilson, W. M. Stoner, Tom Cook, Lowell Jacobs, Gerald White, Margie Case, Arch Lenighan, Thomas Hodge, Jr. of Iver Johnson, Bob Angell of Sile, Robert Bonaventure of Beretta, John Leak of Sterling, Russ Moure of Interarms, Alan Carver of Browning, Steve Hawes of Hawes International, Al Baker of Galef, John Satterwhite of Heckler & Koch, Robert S. L. Anderson, Joseph J. Schroeder, Robert J. Berger, Cliff Bauman, Lt. Gary Paul Johnston and Harold A. Murtz.

Contents

Tools 8
Magazine Disassembly 12
Astra Constable 15
Astra Cub 21
Astra 400 28
Bauer 25 35
Benelli B76 41
Beretta 84 49
Beretta 90 59
Beretta 92S 64
Beretta 950BS 73
Beretta 951 79
Beretta 1934 86
Bersa 383 91
Browning Buck Mark 100
Browning BDA 45 110
Browning BDA 380 118
Browning Hi-Power 130
Colt Mustang 139
Colt 32 Pocket Auto 146
Colt Woodsman 153
Colt 1911 Series 160
Coonan Model B 171
CZ 27 179
CZ 45 189
Desert Eagle 194
F.I.E. Super Titan II 206
F.I.E. TZ75 Series 88 213
Galesi 25 223
Glock 17 227
H&K P7 236

Hi-Standard Sharpshooter 248
Interdynamic KG-99 257
Iver Johnson X300 Pony 266
Luger 272
MAB Model PA-15 279
Mauser HSc 288
Mauser 1896 295
Mauser 1910/34 304
Nambu Type 14 313
Nambu Type 94 320
Ortgies 325
Radom P-35 331
Raven MP-25 343
Ruger P-85 349
Ruger Standard Auto 361
Russian Tokarev 368
Sauer 38H 376
Sauer 1913 381
Savage Model 1908 388
SIG/Sauer P230 396
Smith & Wesson 59 403
Smith & Wesson 459 411
Smith & Wesson 622 420
Smith & Wesson 5906 429
Star PD 440
Steyr 1912 445
Walther P-38 456
Walther PPK/s 466
Walther TPH 471
Index/Cross-Reference 479

Introduction

During the years I have been Gunsmithing Editor for two monthly magazines, one of the most frequently asked questions by readers has been, "How do I take it apart?'' When the limited space of a column answer permitted, I gave the routine takedown steps.

In many cases, I had to tell the reader that nothing had been published on his particular piece. Occasionally, I recommended that the reader try to obtain an instruction booklet from the manufacturer or importer, but this was not always the best answer. In the case of some imported guns, the direct-translation was somewhat humorous to read, or was of little help in actual disassembly and reassembly. In the case of guns no longer made, the instruction sheets are often valuable collector items and are not readily obtainable.

Obviously, something was needed in this area—a book that would cover takedown and reassembly of most of the modern guns, a number of older ones, and some of the tricky aspects of the more well-known pieces. This is the idea behind the book you have in your hands. In other volumes in this series, revolvers, rifles and shotguns will also be covered.

In the area of reassembly, many of the published instructions end with the words, "Reassemble in reverse order." In most cases, this may be the only instruction needed and nothing more will be said here. In others, though, this procedure is insufficient. In this book, reassembly directions will seldom be reduced to a single line in order to avoid an embarrassing trip to the gunsmith carrying a box full of parts. I am confident that the reassembly tips given are clear enough to permit the easy reassembly of all the guns covered. The tips do not include each and every step along the way—only the more complicated ones. You shouldn't have any trouble.

There are elements in total takedown that require, in many cases, the special tools and skills of the gunsmith. The very knowledgeable amateur may be able to detail strip certain guns to the last pin, spring and screw, but some mechanical aptitude is necessary. This book is designed for both the average gun person and the professional. While it covers routine field-stripping, it also covers complete takedown and reassembly.

For simple takedown, the tools needed will seldom be more than screwdrivers of the proper size. Complete takedown will often require several other tools, some of which are not available at the corner hardware store. For this reason, I am including a section on tools, as well as a list of sources for some of the specialized items.

There are a few general rules to be observed in the takedown of any gun. An occasional rap with a plastic mallet may be necessary to free a tight assembly, but for the most part, no force should be used. Never pry; always wear safety glasses as compressed springs can be dangerous. Never take a gun down outdoors, over tall grass, or indoors over a shag carpet. Read the instructions through, at least once, before you begin.

I assume a certain basic intelligence in the reader, and will not start each set of takedown directions with the repeated advice that the gun must be entirely unloaded. *Before you start the takedown of any gun, make a thorough visual check to be sure it's empty.* Check all chambers in a revolver, and the magazine and chamber in an automatic pistol to be sure they are *empty*. In this area, any mistakes could be very hazardous to your health, so be certain.

An important addition to the back of this book is a comprehensive index and cross-reference list, linking all of the pistols covered here to guns of similar or identical pattern. When these are included in the count, the instructions in this revised edition can be used for the takedown and reassembly of 250 pistols.

Small mechanical variations are noted on the data page for each pistol, in cases which would cause no takedown or reassembly difficulty. If the difference involves a more complicated procedure, then a separate sequence of photos and instructions is included.

An excellent companion to this book is the *Gun Digest Book of Exploded Firearms Drawings*, also available from DBI Books, Inc. Soon to go into its fourth volume, this book clearly shows parts relationships as well as factory part numbers for over 800 modern and collector's handguns and long guns.

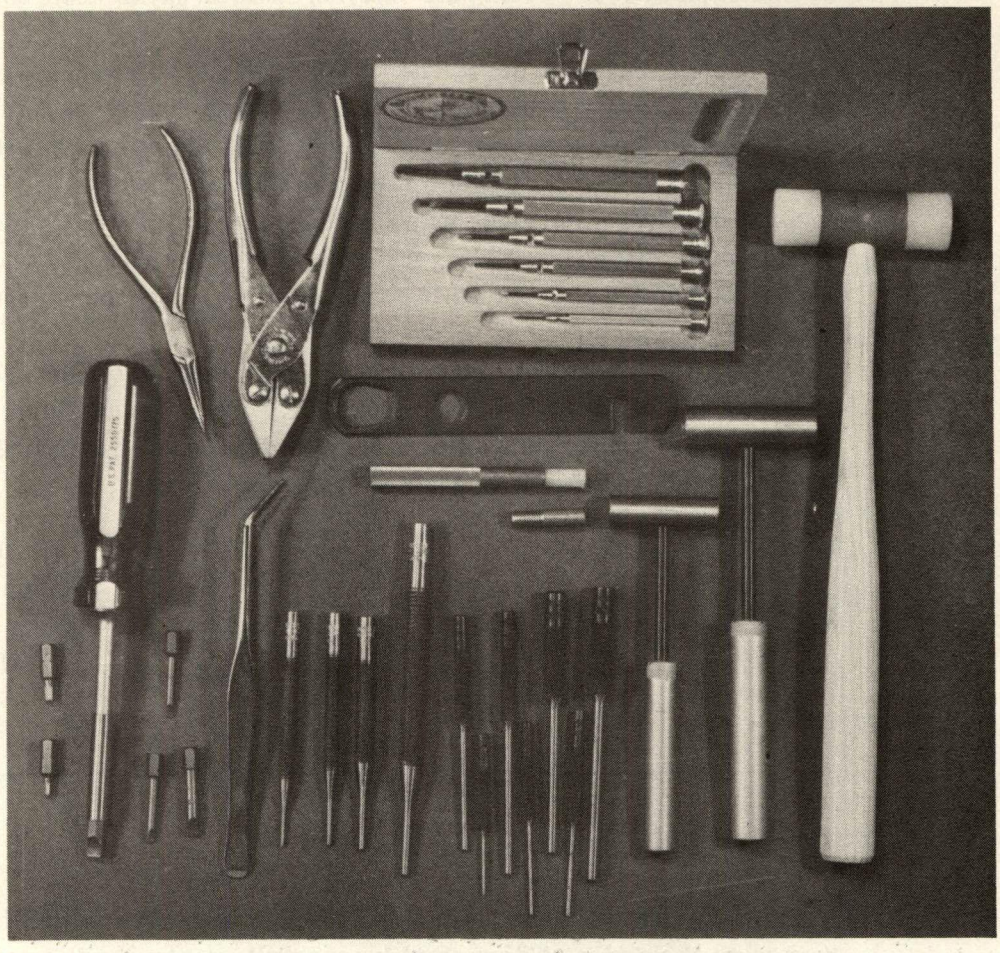
J. B. Wood
Raintree House
Corydon, Kentucky
March, 1990

A Note On Reassembly:

Most of the pistols covered in this book can be reassembled by simply reversing the order of disassembly, carefully replacing the parts in the same manner they were removed. In a few instances, special instructions are required, and these are listed with each gun under "Reassembly Tips." In certain cases, reassembly photos are also provided.

If there are no special instructions or photos with a particular gun, you may assume that it can just be reassembled in reverse order. During disassembly, note the relationship of all parts and springs, and lay them out on the workbench in the order they were removed. By following this procedure you should have no difficulty.

Tools



Countless firearms, old and new, bear the marks, burrs, and gouges that are the result of using the wrong tools for taking them apart. In the interest of preventing this sort of thing, I am including here a group of tools that are the best types for the disassembly of automatic pistols. Except for the few shop-made tools for special purposes, all of those shown here are available from one of these two sources:

Brownells, Inc.
Route 2, Box 1
Montezuma, Iowa 50171

B-Square Company
P.O. Box 11281
Fort Worth, Texas 76109

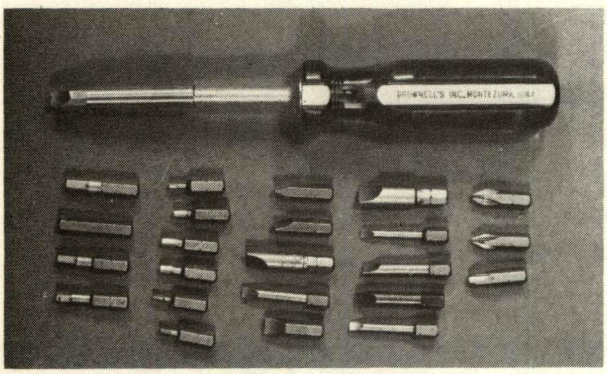
General Instructions:

Screwdrivers: Always be sure the blade of the screwdriver exactly fits the slot in the screw head, both in thickness and in width. If you don't have one that fits, grind or file the tip until it does. You may ruin a few screwdrivers, but better them than the screws on a fine pistol.

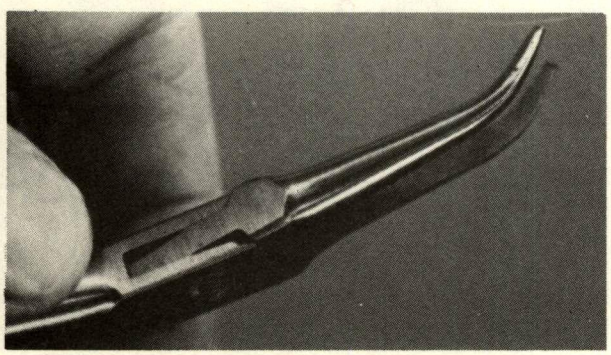
Slave pins: There are several references in this book to slave pins, and some non-gunsmith readers may not be familiar with the term. A slave pin is simply a short length of rod stock (in some cases, a section of a nail will do) which is used to keep two parts, or a part and a spring, together during reassembly. The slave pin must be very slightly smaller in diameter than the hole in the part, so it will push out easily as the original pin is driven in to retain the part. When making a slave pin, its length should be slightly less than the width of the part in which it is being used, and the ends of the pin should be rounded or beveled.

Sights: Nearly all dovetail-mounted sights are drifted out toward the right, using a nylon, aluminum, or brass drift punch.

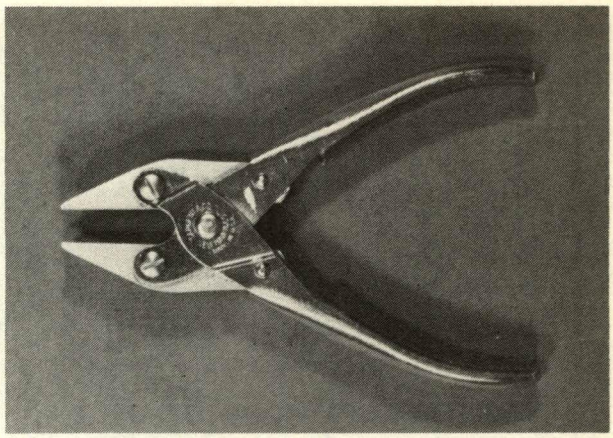
1. The tiniest of these fine German instrument screwdrivers from Brownells is too small for most gun work, but you'll see the rest of them used frequently throughout the book. There are many tight places where these will come in handy.



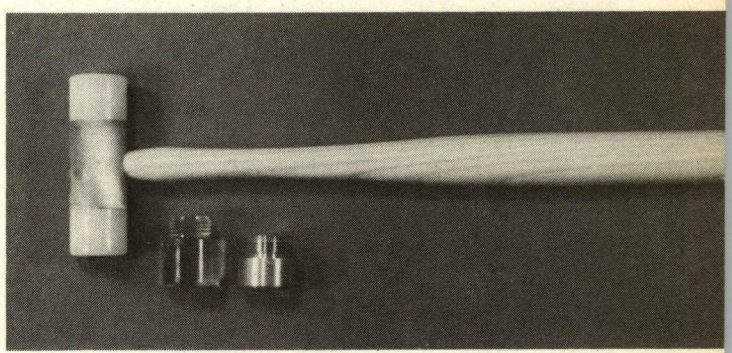
2. When a larger screwdriver is needed, this set from Brownells covers a wide range of blade sizes and also has Phillips- and Allen-type inserts. The tips are held in place by a strong magnet, yet are easily changed. These tips are very hard. With enough force you might manage to break one, but they'll never bend.



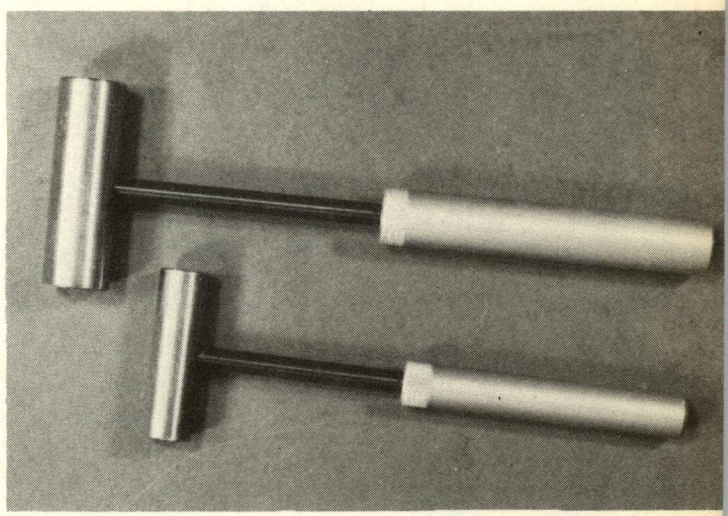
3. You should have at least one good pair of bent sharp-nosed pliers. These, from Brownells, have a box joint and smooth inner faces to help prevent marring.



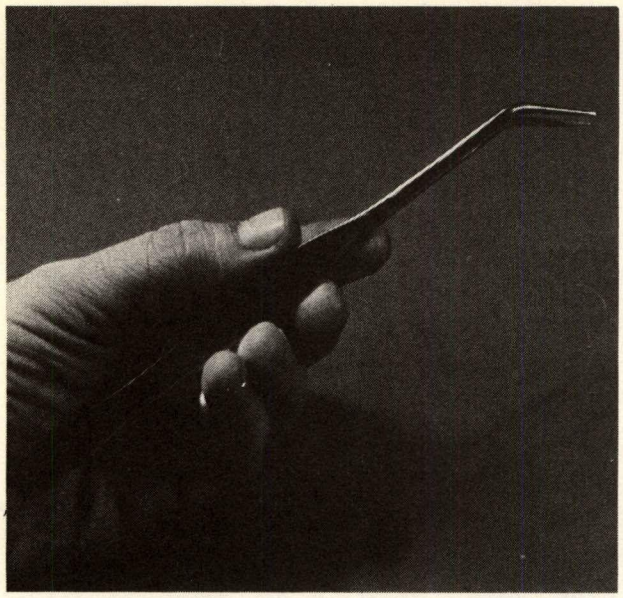
4. For heavier gripping, these Bernard parallel-jaw pliers from Brownells have smooth-faced jaw pieces of unhardened steel to prevent marring of parts.



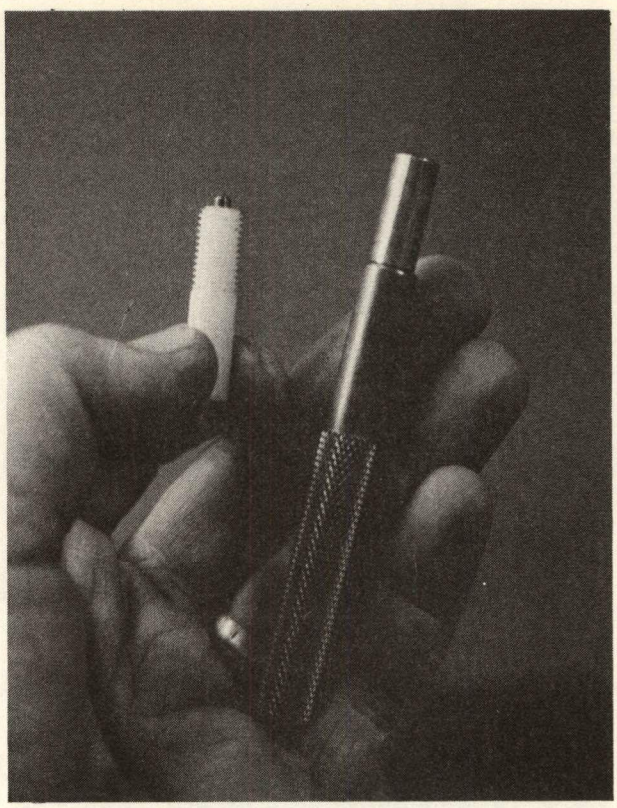
5. For situations where a non-marring rap is needed, this hammer from Brownells is ideal. It is shown with nylon faces on the head, but other faces of plastic and brass are also available. All are easily replaceable.



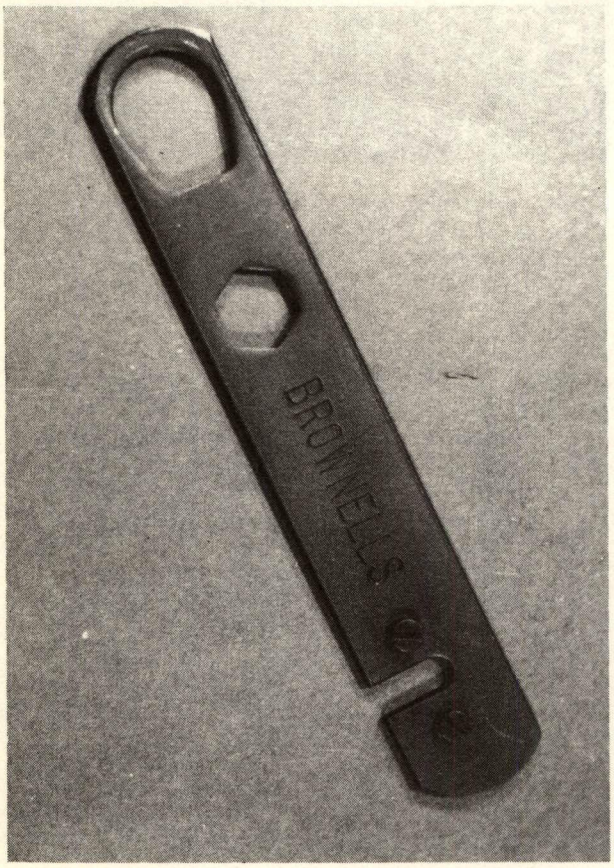
6. For drifting out pins, these small all-metal hammers from B-Square are the best I've seen. Two sizes (weights) are available and they're well worth the modest cost.



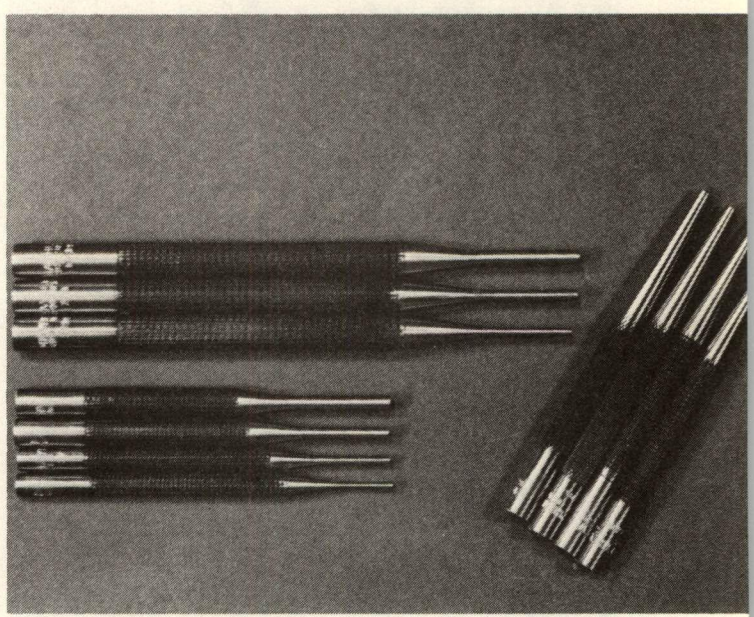
7. For situations where reach and accessibility are beyond the capabilities of sharp-nosed pliers, a pair of large sharp-nosed forceps (tweezers) will be invaluable. From Brownells.



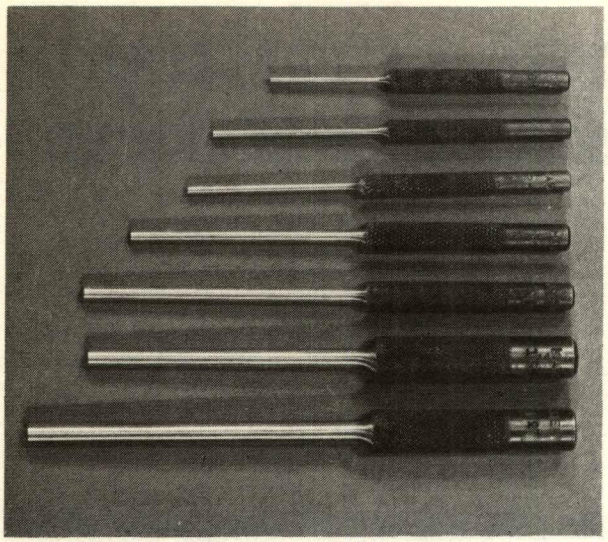
9. One of the most-used tools in my shop is this nylon tipped drift punch, shown with an optional brass tip in place on the handle. It has a steel pin inside the nylon tip for strength. From Brownells, and absolutely essential.

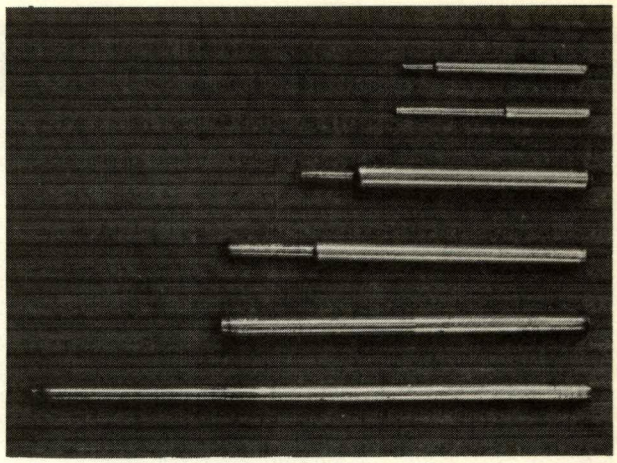


8. This universal Colt tool from Brownells will also work on some other autos of similar design, and even has features for some revolver work. Its main function, of course, is for the removal of a tight barrel bushing on Colt autos.

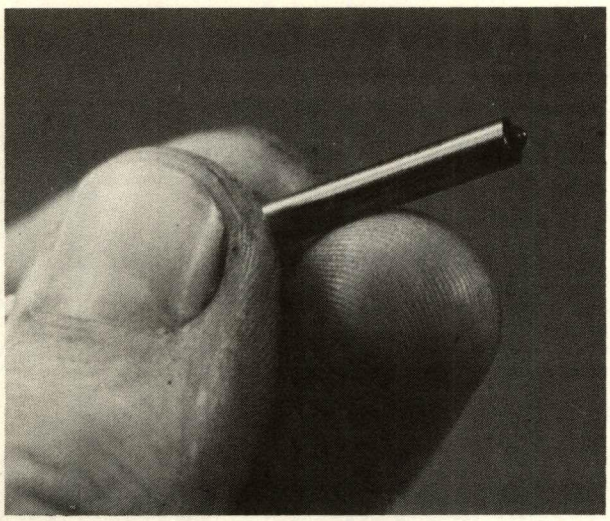


10. A good set of drift punches will prevent a lot of marred pins. These, from Brownells, are made by Mayhew. The tapered punches at the right are for starting pins, the others for pushing them through. Two sizes are available—4" or 6".

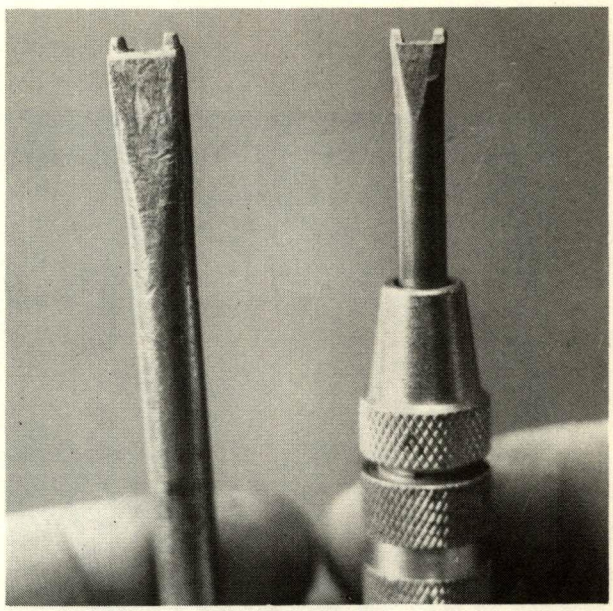




12. Some of the necessary tools are easily made in the shop. These non-marring drift punches were made from three sizes of welder's brazing rod.



11. These punches by Mayhew are designed specifically for roll pins and have a projection at the center of the tip to fit the hollow center of a roll pin, driving it out without deformation of the ends. From Brownells.

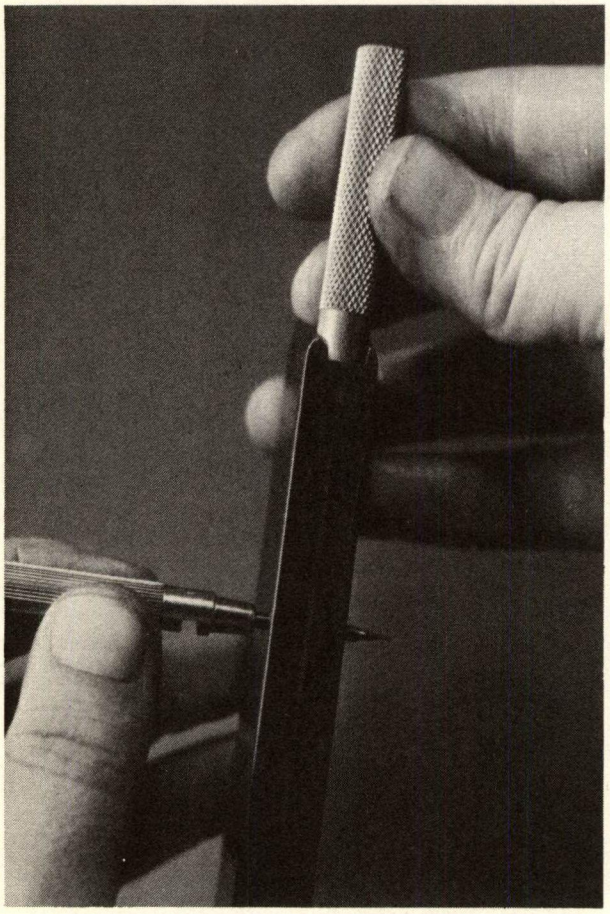


13. In automatic pistols, the most frequent need for a split-end screwdriver, or two-point wrench, occurs with certain magazine catch buttons. The ones shown were made by cutting away the center of old screwdriver blades, then thinning the points to fit the job. They may be a bit on the crude side but they work!

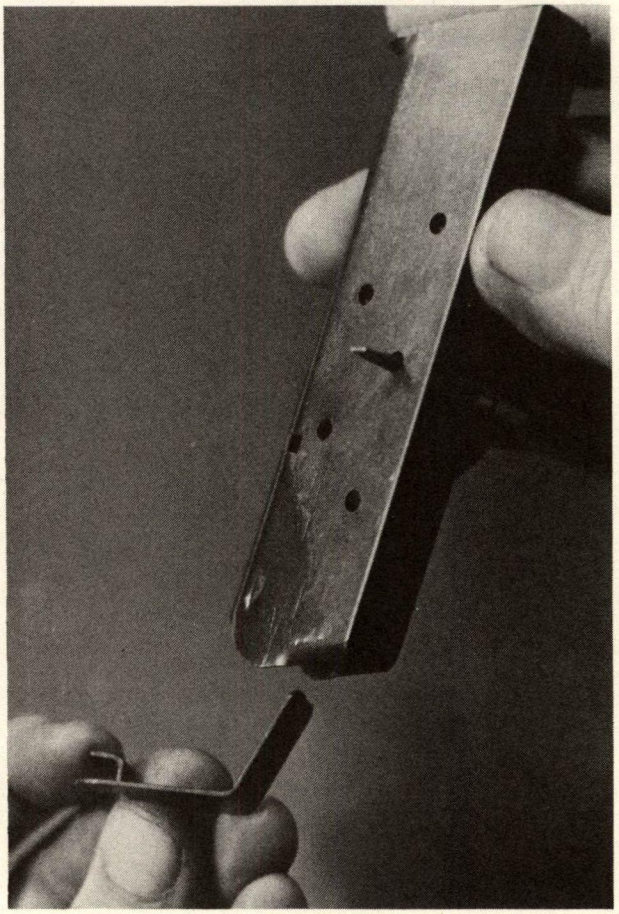
Magazine Disassembly

In regard to takedown, most magazines fall into two general categories distinguished by fixed or removable floorplates. An example of the fixed type is the magazine of the 45-caliber 1911 military pistol. Most of the currently-made pistols, especially in the larger calibers, have magazines with removable floorplates.

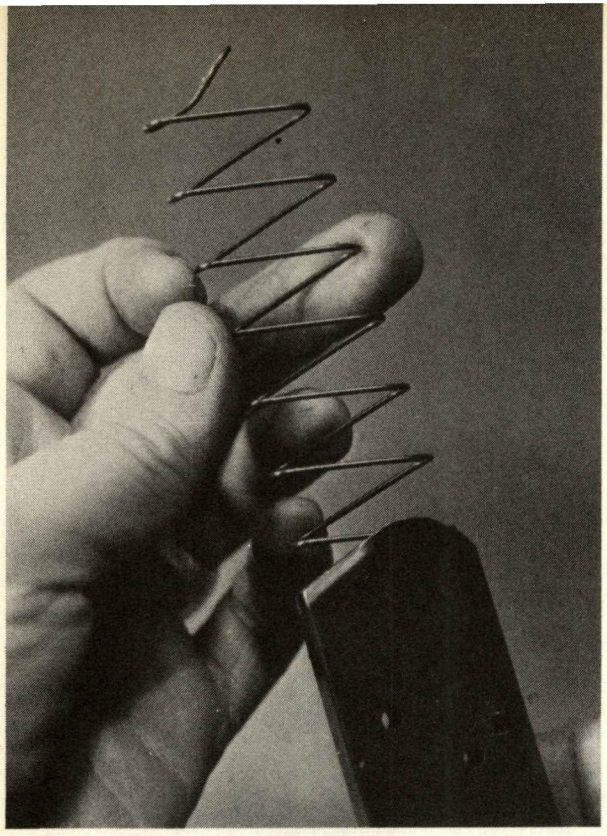
Fixed Floorplate Type:



1. With a nylon-tipped punch or some other non-marring tool, depress the magazine follower to about the halfway point, and insert a small screwdriver through one of the counter holes and between the follower and the spring.



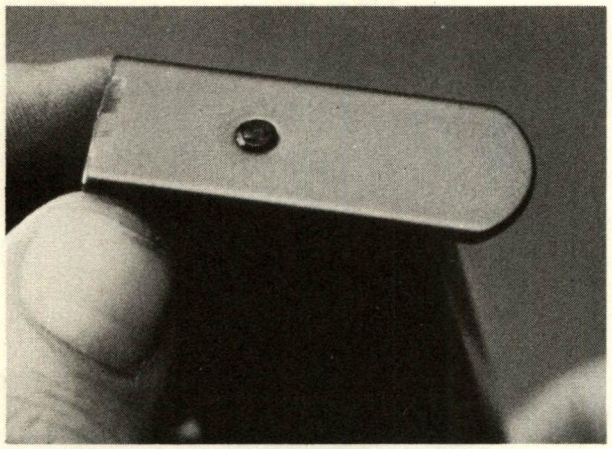
2. With the spring trapped beneath the screwdriver, the follower can usually be shaken out and removed from the top of the magazine. If the follower is tight, it may be necessary to insert another small tool through one of the other counter holes and lever it upward to free it.



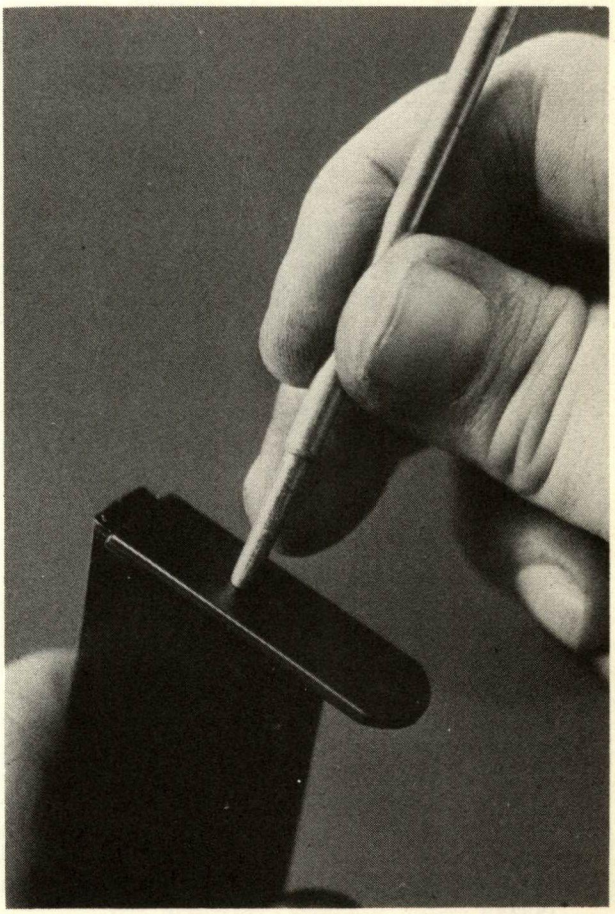
3. Hold a heavy shop cloth over the top of the magazine to catch the spring and remove the screwdriver from the counter hole. **Caution:** *The spring is under tension, so be sure the cloth gives enough padding to prevent injury.* Remove the spring from the top of the magazine.

Most fixed-floorplate magazines can be completely disassembled, as the floorplate is usually held in place either by cross-pins, or by staking the lower edge of the magazine shell into grooves or recesses. But, even when removal is done by a careful professional, some damage is inevitable. It's best to leave the fixed-type floorplates in place.

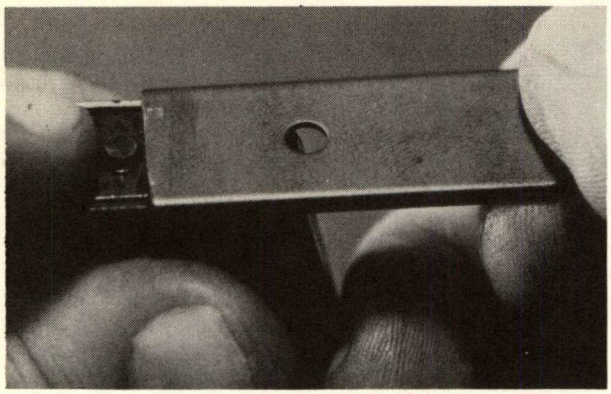
Removable Floorplate Type:



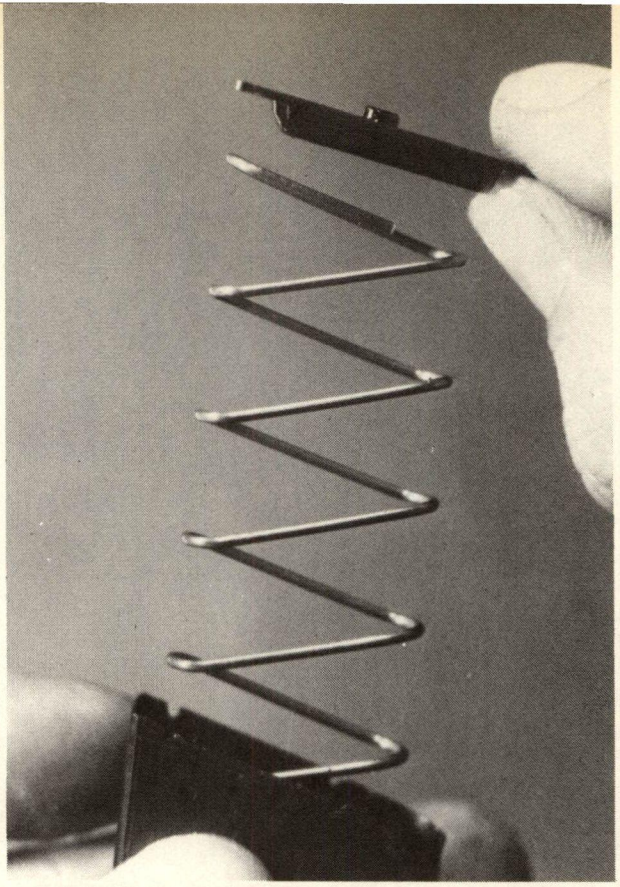
4. The removable floorplate is usually locked in place by an internal lockplate with a button at the center which protrudes through a hole in the floorplate.



5. Depress the button with a brass punch or some other non-marring tool and slide the floorplate toward the front of the magazine, but not more than half-way.

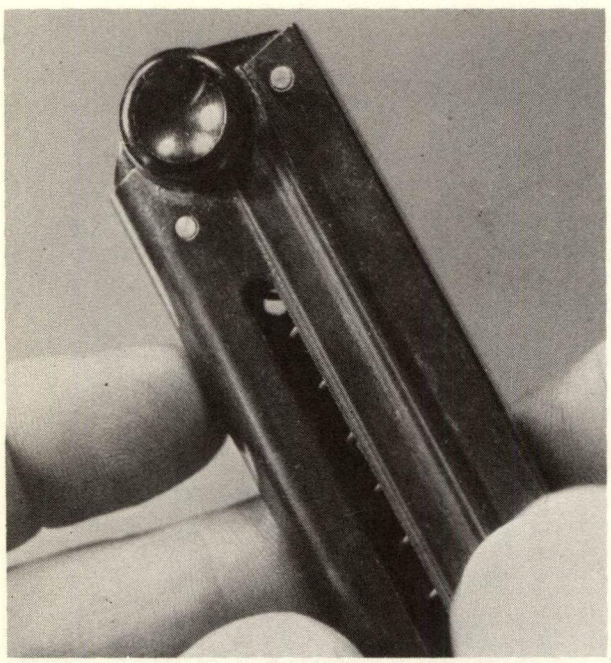


6. Restrain the lockplate against the tension of the magazine spring, and slide the floorplate off toward the front. **Caution:** *Be sure to keep the lockplate under control, as the spring can send it quite a distance if released suddenly.*

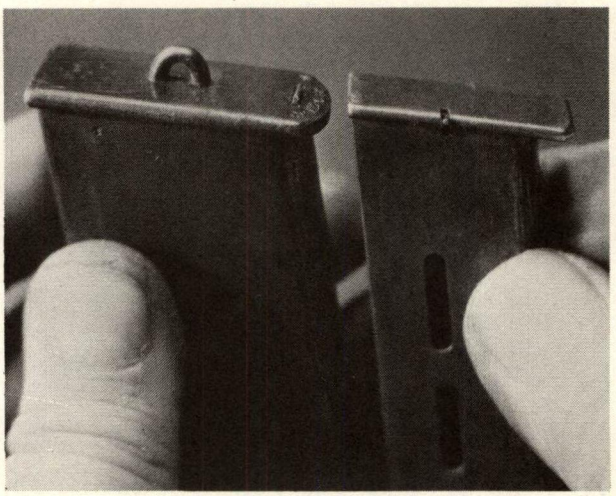


7. Release the spring tension slowly, and remove the lockplate, spring, and follower from the bottom of the magazine.

Other Magazines:

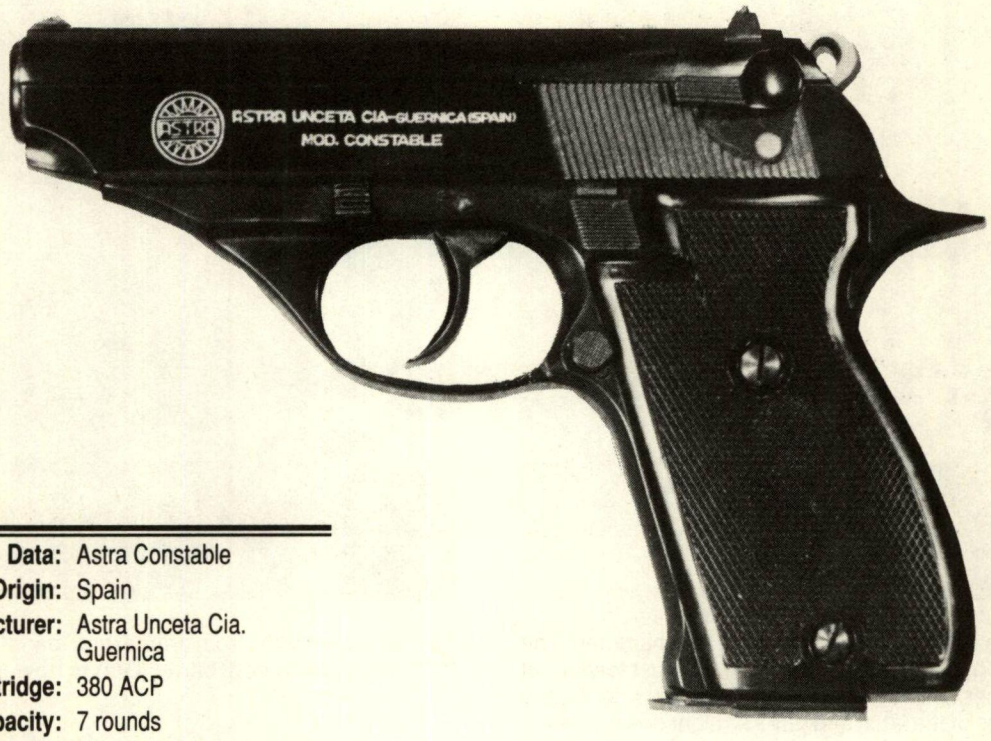


8. In some magazines, such as the Parabellum (Luger) shown, the floorplate is a shaped endpiece retained by one or more cross-pins. When these are drifted out, the endpiece can be removed and the spring taken out from the bottom of the magazine. The follower is then moved down until the follower button aligns with its opening in the side track. The button is then lifted out toward the side and the follower removed from the bottom.



9. Some magazines with sliding removable floorplates have different retaining methods. The Russian Tokarev, shown on the left, has an internal lockplate with a release tab near the front of the plate. This is pushed inward, in the same way as the button on the usual type. The Mauser 1910 (right) has a slot in the left edge of the floorplate for the angled tip of the magazine spring. The tip of the spring is pushed upward to clear the slot and the floorplate is slid off toward the front.

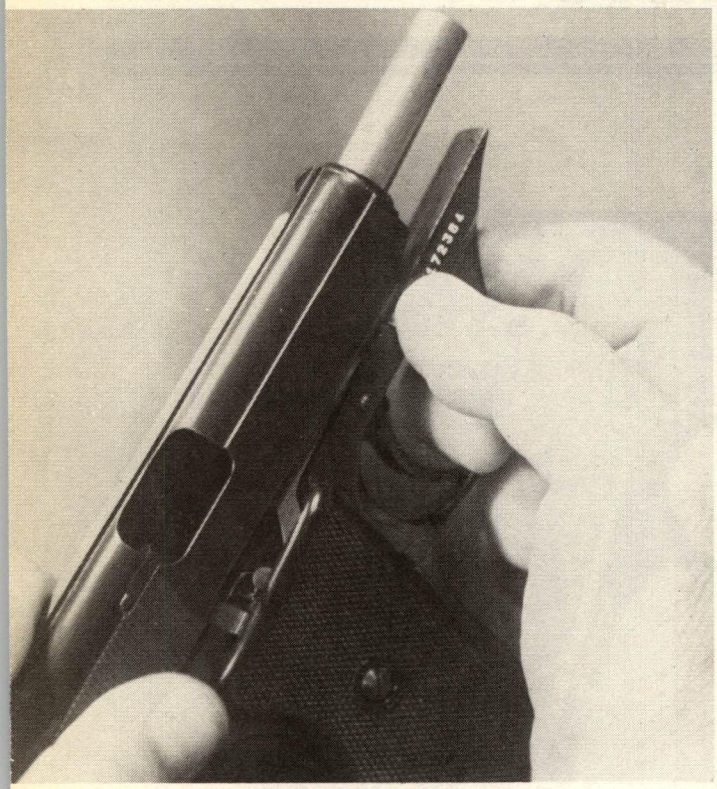
Astra Constable



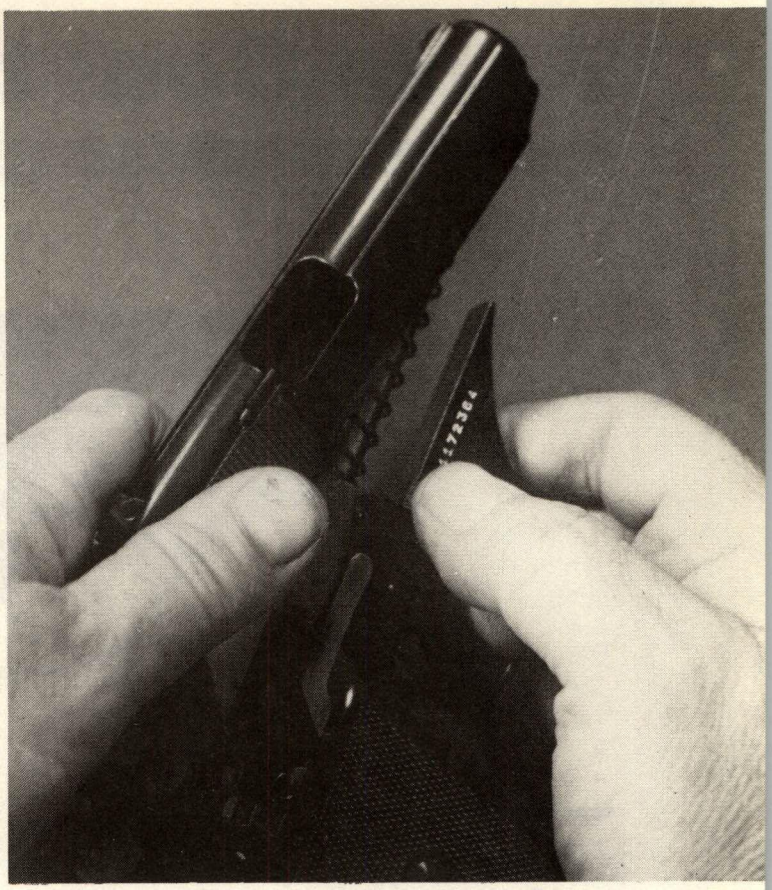
Data:	Astra Constable
Origin:	Spain
Manufacturer:	Astra Unceta Cia. Guernica
Cartridge:	380 ACP
Magazine capacity:	7 rounds
Overall length:	6 1/2 inches
Height:	4 5/8 inches
Barrel length:	3 1/2 inches
Weight:	26 ounces

Astra's double action medium-size automatic externally resembles the Walther, but its internal mechanism is entirely different. The Constable is also available in 32 ACP and 22 LR versions, with the latter, and the 380 chambering, being the most popular in the United States. The Constable has two things that the Walther lacks—an external slide latch, and a reasonable price. Quality of materials and workmanship are excellent.

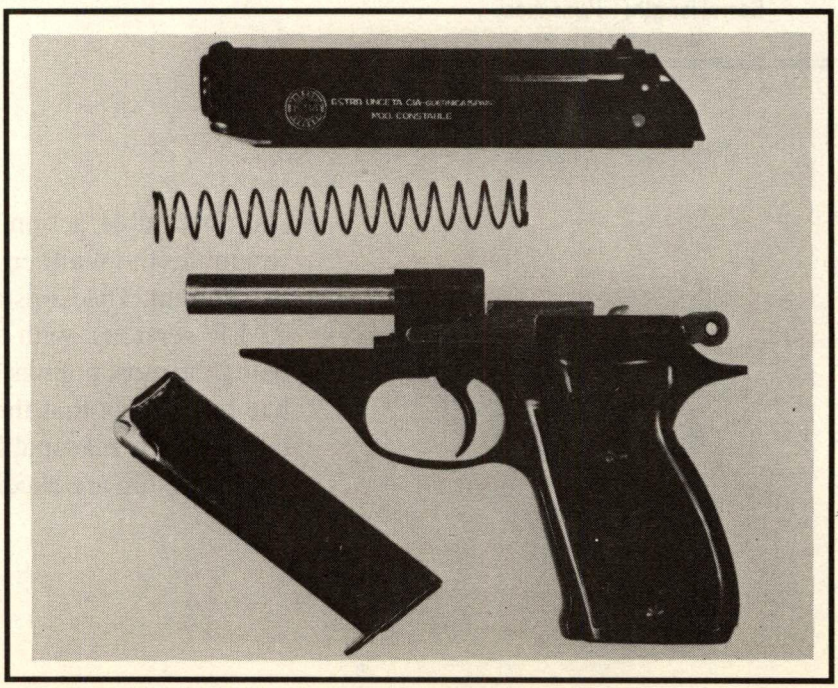
Field Strip:



1. Remove the magazine and cock the hammer. The takedown-latch is located in the frame just forward of the trigger, with serrated wings at each side. Grasp the wings of the latch and pull it straight down, holding it there while the slide is drawn all the way back, lifted up at the rear to clear the barrel, and run forward off the frame.



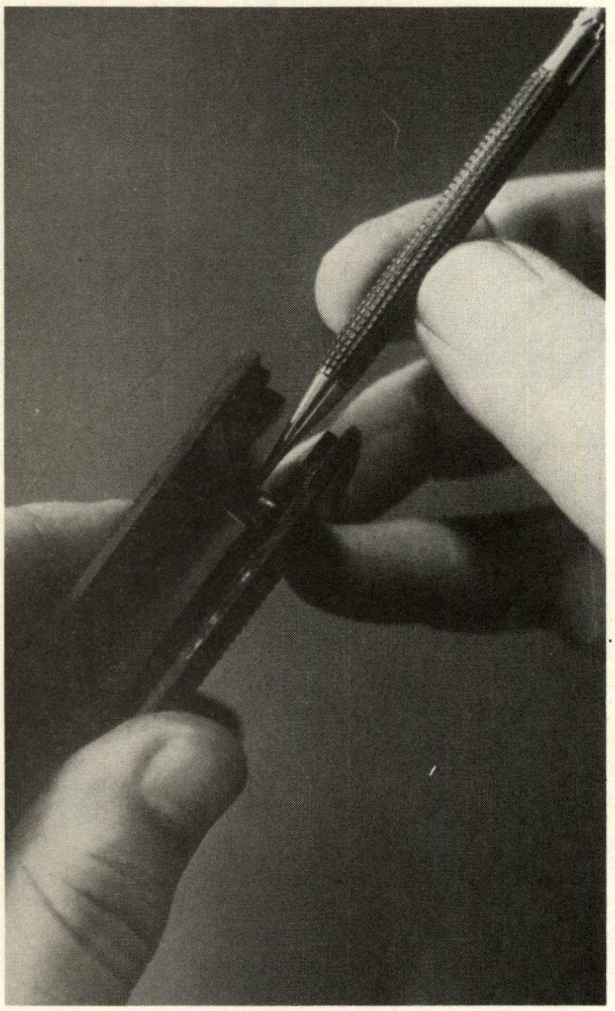
2. Remove slide from frame and barrel, and remove recoil spring from barrel. **Gun is now field-stripped.**



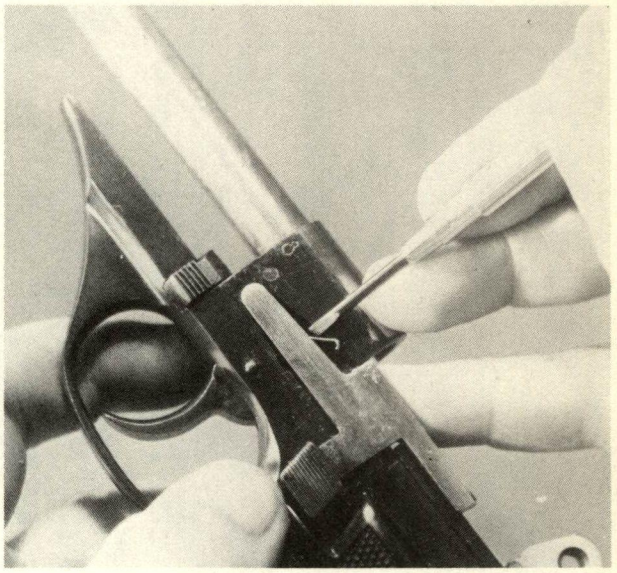
Astra Constable field-stripped

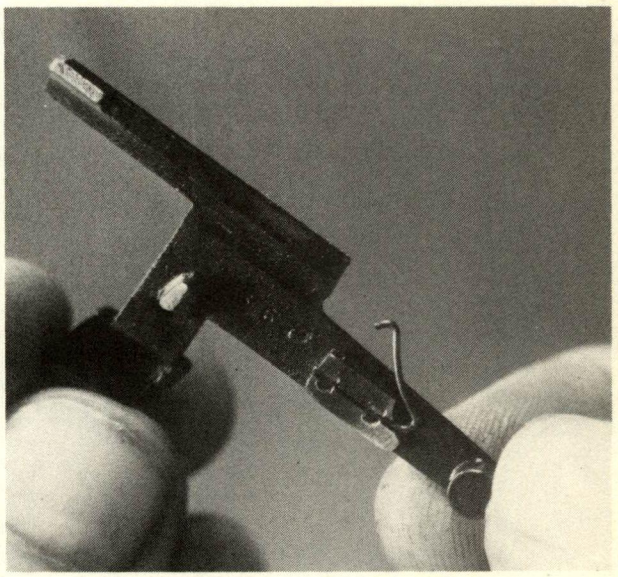
Detail Strip:

3. With a drift punch, depress the firing pin (with the safety in the off-safe position) and nudge the safety toward the left side. If it is very tight, set the safety halfway between its two positions (while keeping the firing pin depressed), and try leftward pressure again. Remove the safety from the left side. The firing pin and spring will be released, and can be removed from the rear. The extractor can now be taken off, and the combination extractor and safety spring and its two plungers removed forward, from the extractor recess.



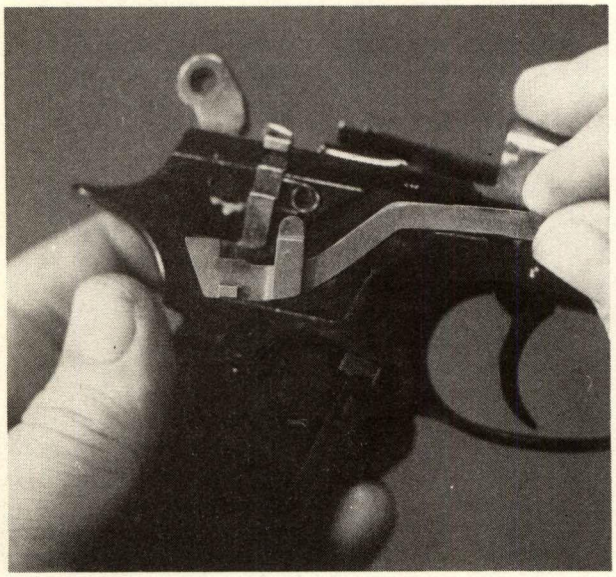
4. Use a small screwdriver to depress the slide latch spring and ease it from under its shelf on the frame. The slide latch can now be removed toward the left.



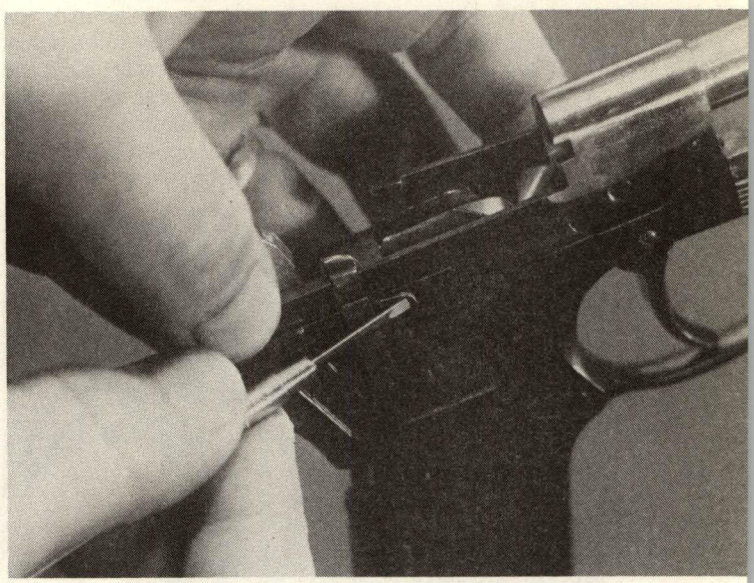


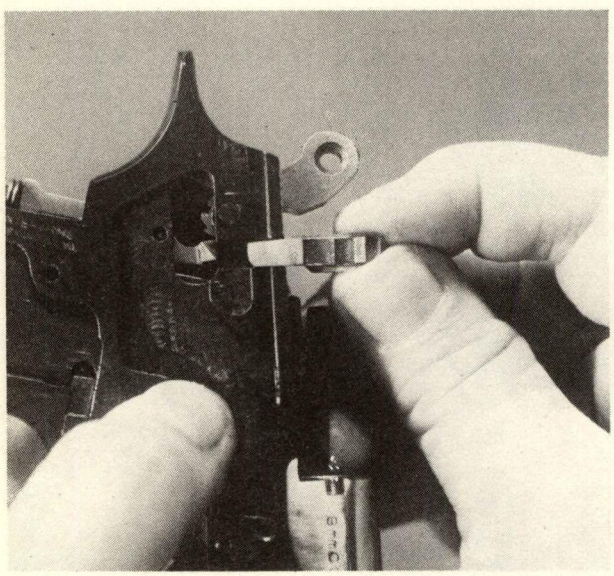
5. The slide latch spring is staked in place on the inside of the latch, and removal is not advisable except for replacement.

6. With the hammer lowered, depress the trigger bar to clear the safety disconnector and lift the bar off toward the right.

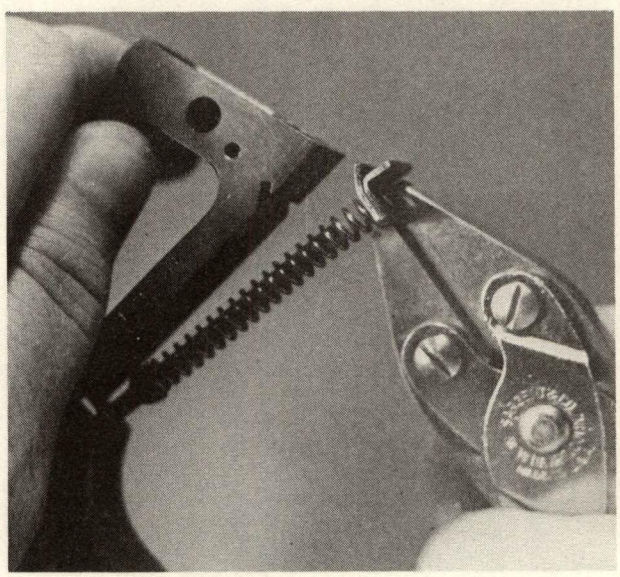


7. With a small screwdriver, pry the safety disconnector spring from its recess in the frame. Add one thing not shown in the photo for purposes of clarity—a fingertip over the spring to prevent its escape.



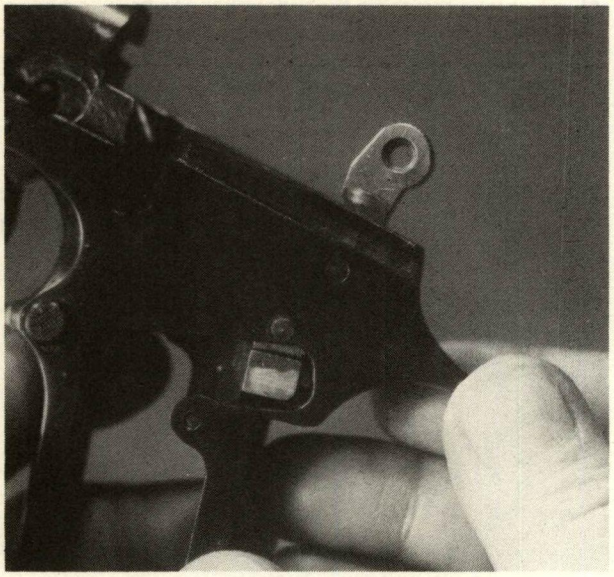


8. Slide the safety disconnector upward and off the frame.

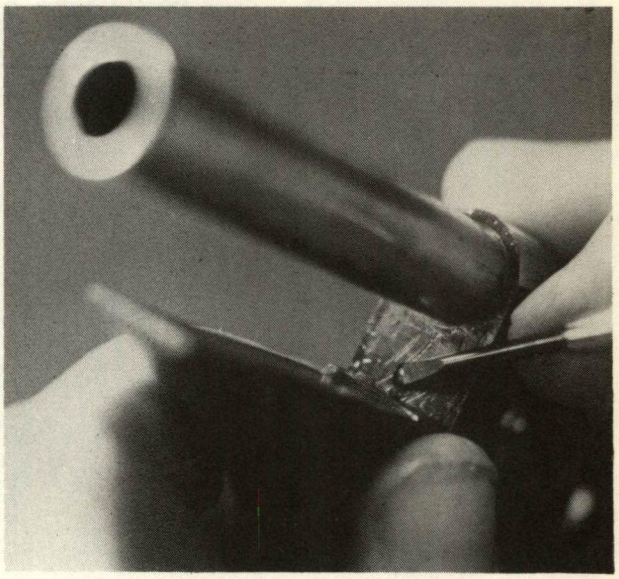


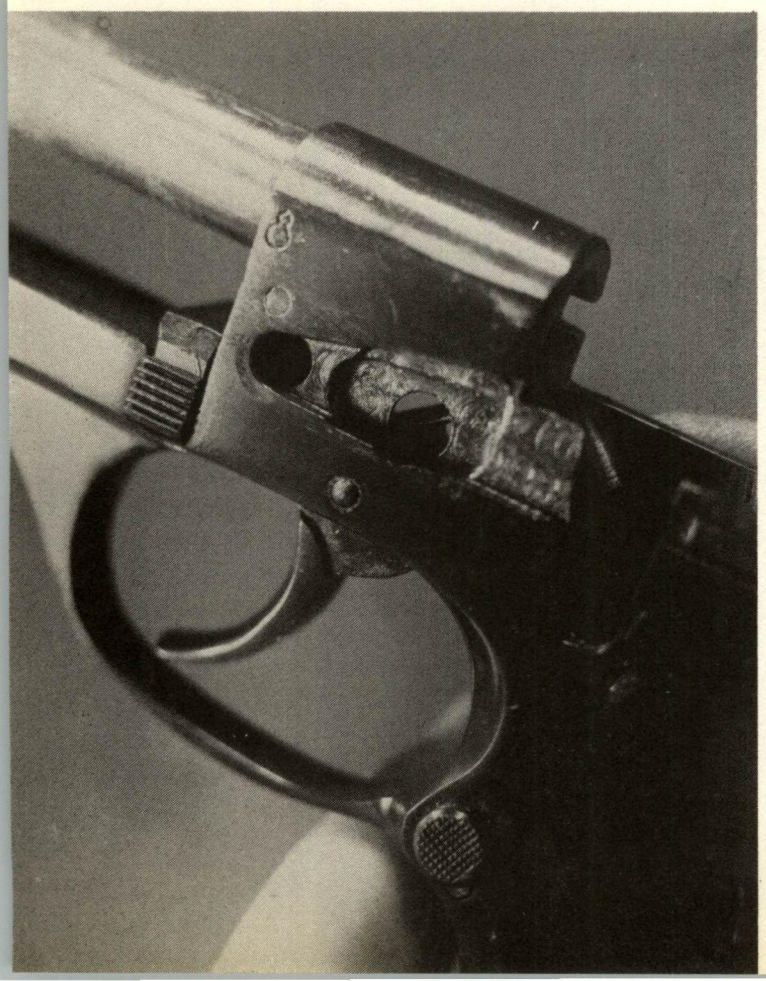
9. Grip the hammer spring base with pliers and disengage it from its locking recess in the backstrap. **Caution:** *Spring is under tension. Ease it off, and remove spring and hammer strut from frame.*

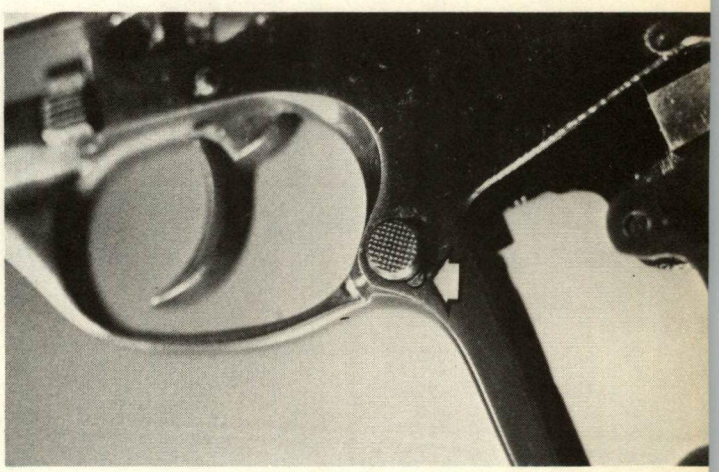
10. Drifting out the large pin at the top rear of the frame will free the hammer for removal from the top. The lower pin must be drifted out from right to left, and will release the sear and sear plunger for removal forward and downward. Take care not to lose the sear spring and plunger, housed in the left side of the sear.



11. The takedown-latch can be removed by depressing and holding in the small plunger above it, and moving the latch upward and off the frame.



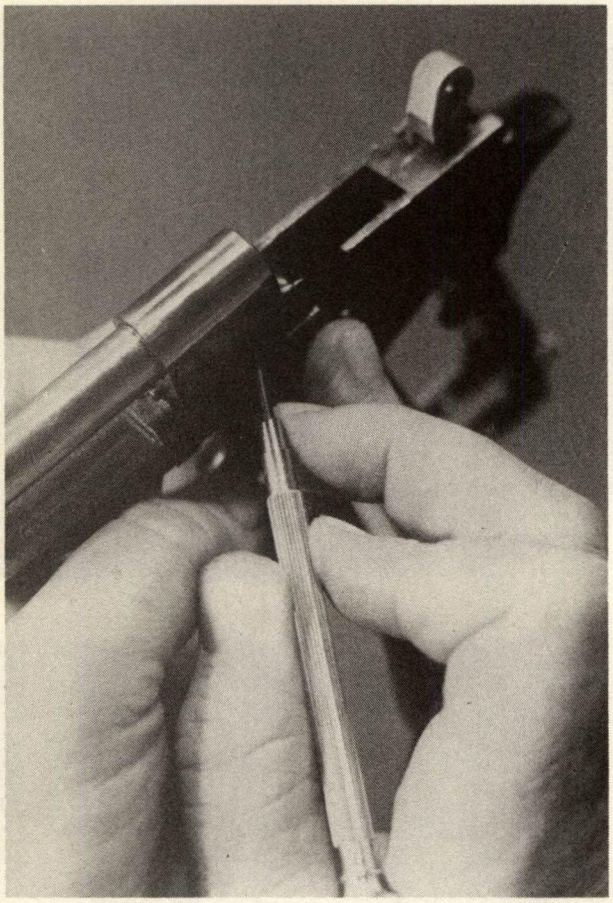




13. There is a small retainer tab (arrow) just below the magazine catch button, level with the frame. Depress the retainer, and while holding it down unscrew the magazine catch button. Remove button, retainer, and spring from the left side, and the magazine catch piece from the right side.

12. The trigger and its spring are retained by a cross-pin. The pin should be moved toward the left side. After this is drifted out, the trigger is taken out downward, into the trigger guard opening.

Reassembly Tips:



1. To make replacing the trigger bar easier, insert a tool through the large opening on the left side and depress the long upper arm of the trigger spring, making sure that it is engaged beneath the inner stud of the trigger bar.

For replacing the safety lever on the slide, use a small tool to depress the plunger at the end of the safety well, holding the plunger in while the safety is moved into place.

When replacing the safety disconnector on the right side, insert the upper arm of its spring into the small hole in the part, then move the spring into its recess.

Astra Cub

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Astra Cub also apply to the following guns.

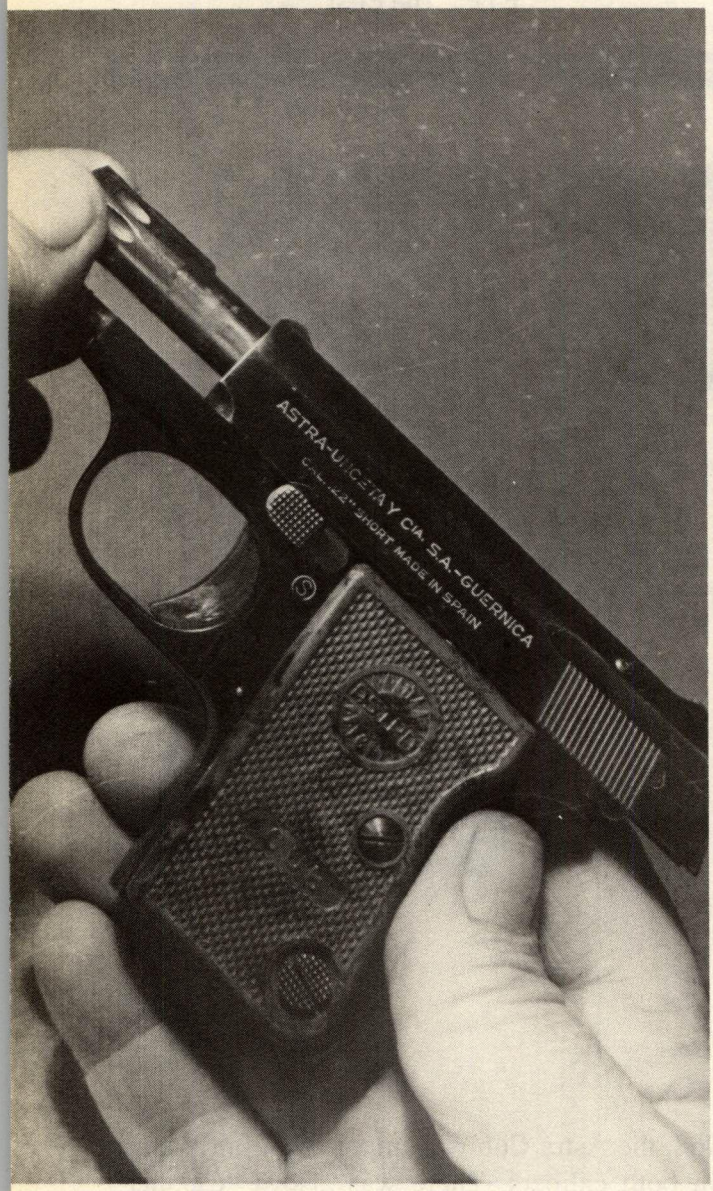
Astra Camper **Colt Junior** **F.I.E. "The Best"**

Data:	Astra Cub 22 and 25
Origin:	Spain
Manufacturer:	Astra Unceta y Compania Guernica
Cartridges:	22 Short, 25 ACP
Magazine capacity:	22—6 rounds; 25—7 rounds
Overall length:	$4\frac{3}{8}$ inches
Height:	$3\frac{5}{16}$ inches
Barrel length:	$2\frac{1}{4}$ inches
Weight:	$12\frac{1}{4}$ ounces

Prior to 1968, the Astra Cub was imported in fairly large quantity, in both calibers. There was also a "Camper" model in the 22-caliber chambering with an extended barrel. The gun was made by Astra for Colt for a short time and marketed as the Colt "Junior," with a conversion package available to switch calibers. It's a fine little gun, and shooters and collectors now vie for the few remaining in circulation in the U.S. Until recently, the same basic pistol was made in America by F.I.E. Corp. as "The Best." The instructions apply for all versions.

Field Strip:

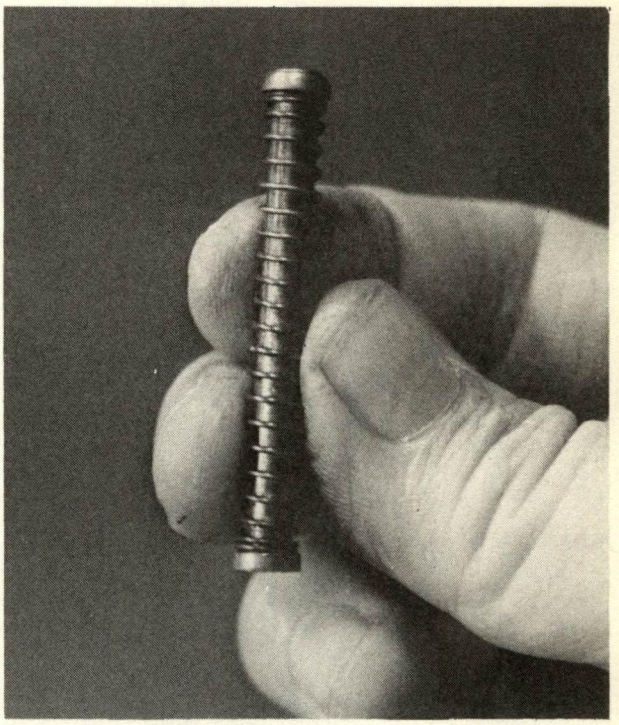
1. Use the safety-lever to lock the slide open, turn the barrel clockwise (front view) until it stops, then pull it forward until it stops.

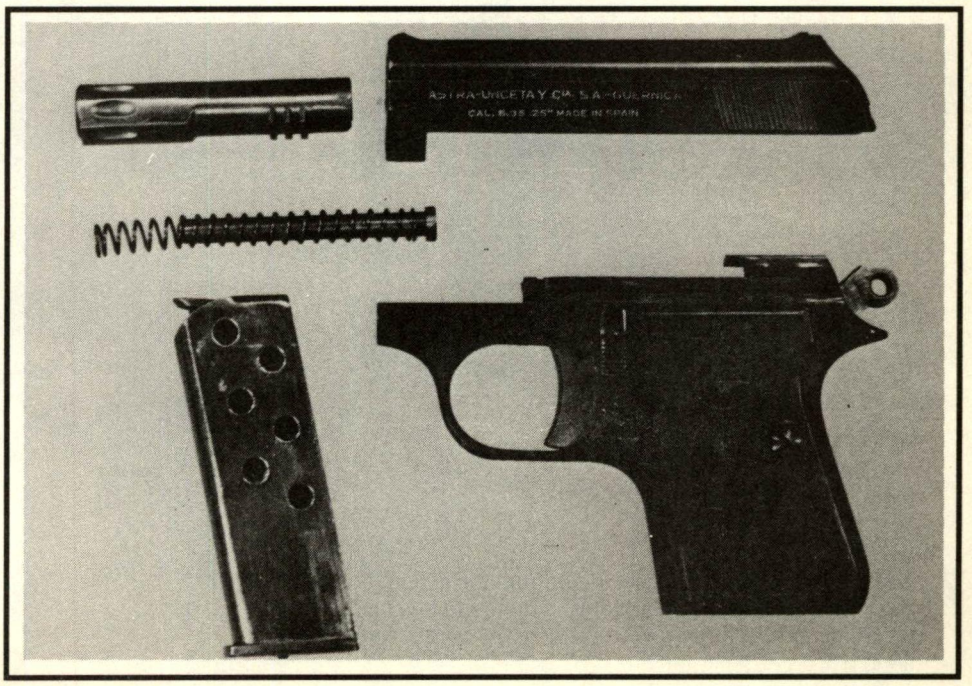


2. Turn the barrel back to original position, and pull it forward out of the slide.

3. Release the safety and run the slide forward off the frame.

4. Remove the recoil spring and guide from the frame. Note: On the 22 version, the recoil spring and guide are a closed unit, as shown in this photo. The rear endpiece, shown at bottom in this photo, is threaded onto the guide rod and staked in place. It is not easily removed. **Gun is now field-stripped.**

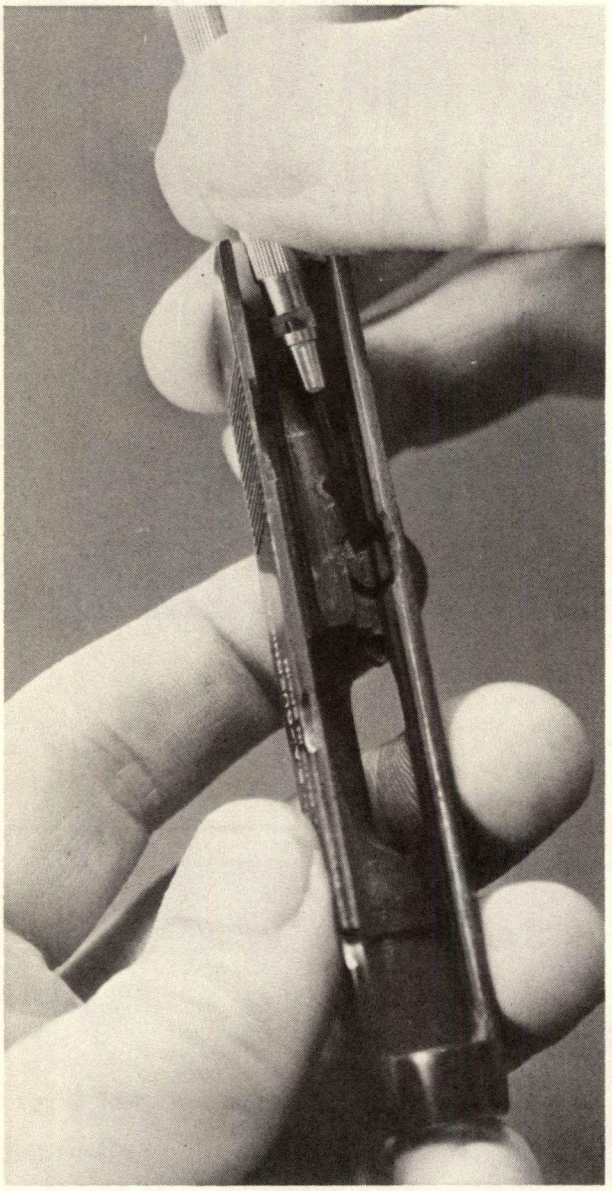




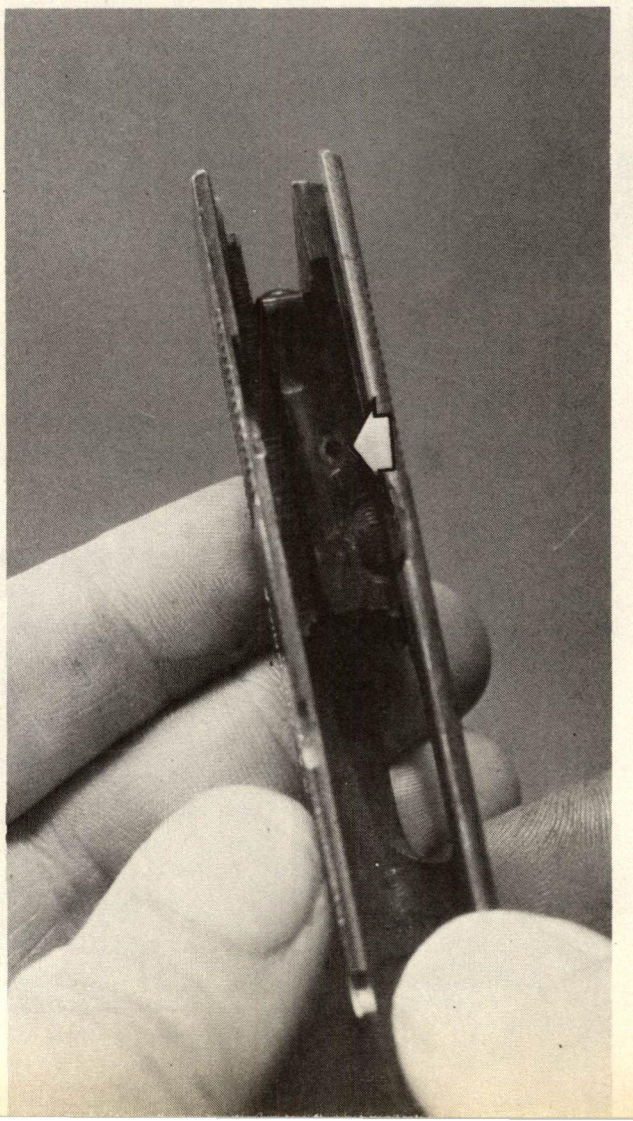
Astra Cub field-stripped

Detail Strip:

5. On the 22 version, use a small screwdriver to pry out the shaped head of the extractor pivot, releasing the extractor and its spring. The 25-caliber version has a vertical roll pin for an extractor pivot, and this is driven straight downward to remove.

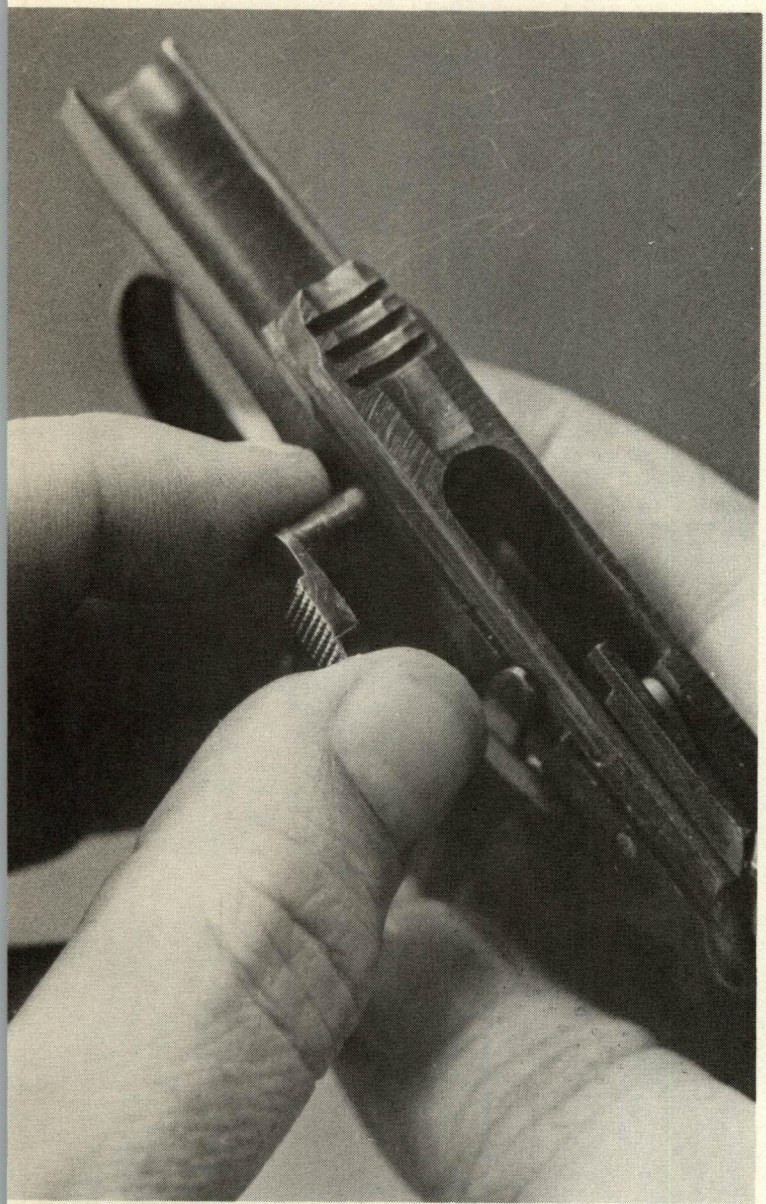


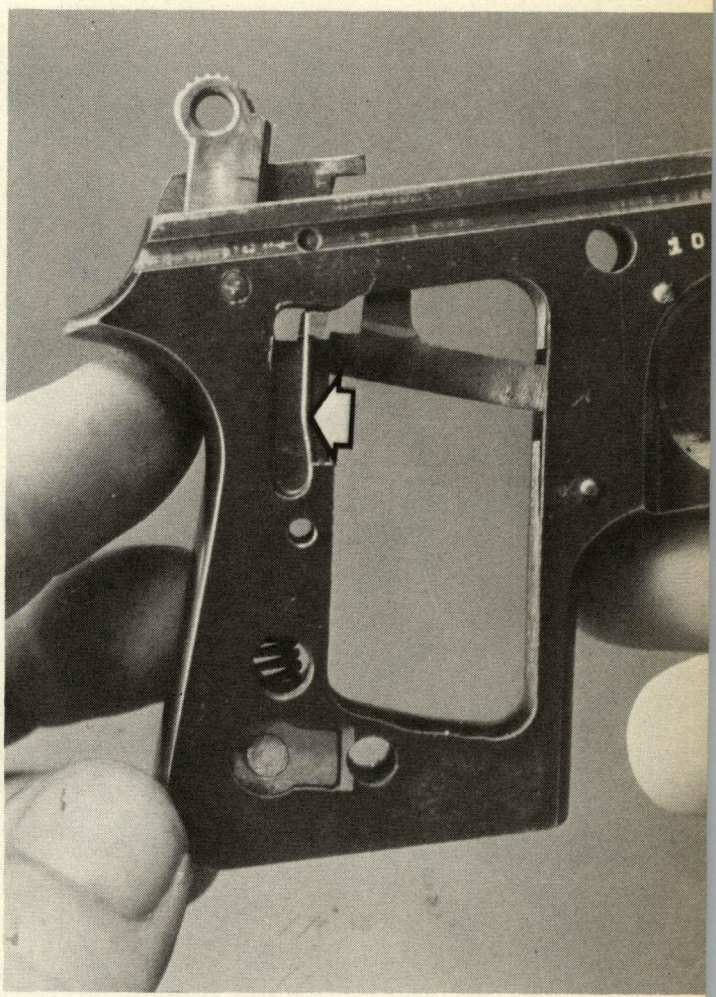
6. The firing pin on the 22 version is retained by a slanting cross-pin, its outer head visible here on the left rear of the slide.



7. The slanted cross-pin is driven out from the inside of the slide, from the right and angling up to the left. On the 25 version, removal of the extractor also frees the firing pin.

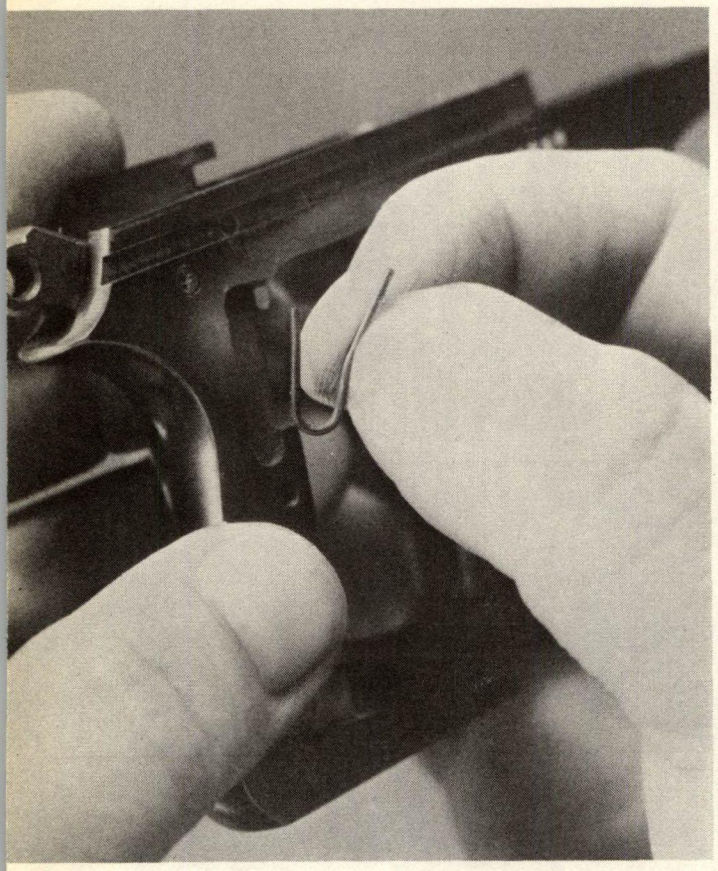
8. With the grips removed, turn the safety-lever around until it is pointing toward the rear of the frame, and remove it to the left.



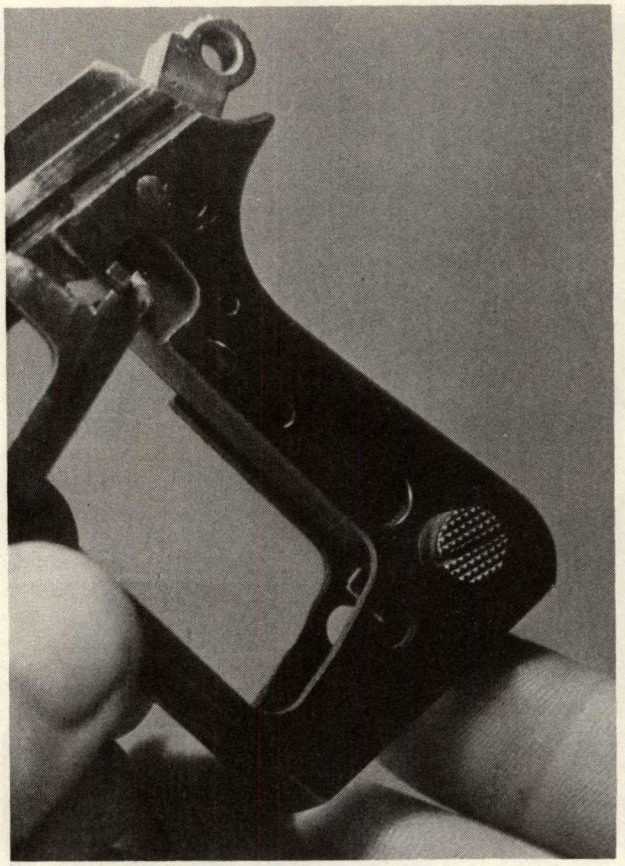


9. The sear spring is a round-wire type, located in a recess on the right side of the frame.

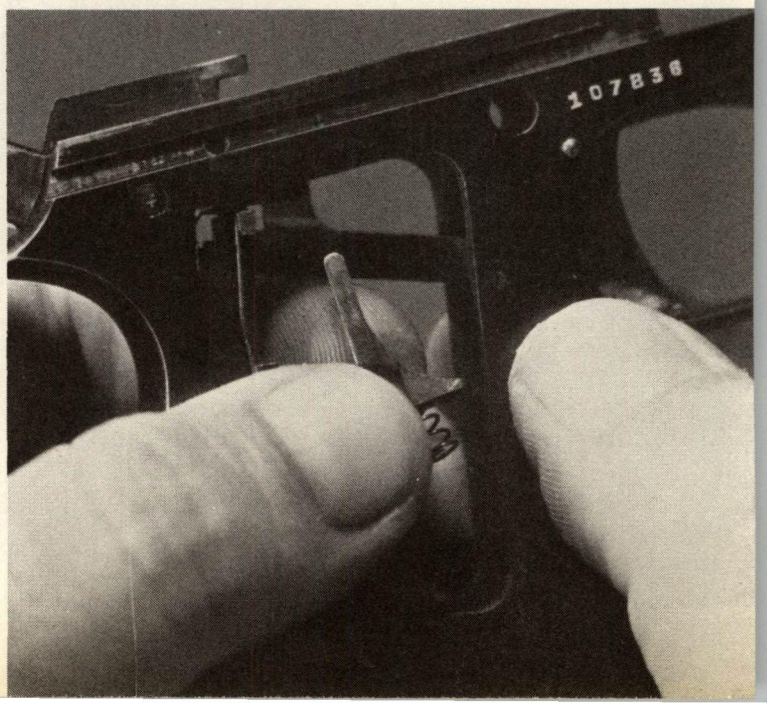
10. Flex the front arm of the spring toward the rear to clear its notch in the sear, and lift the spring out of its recess.



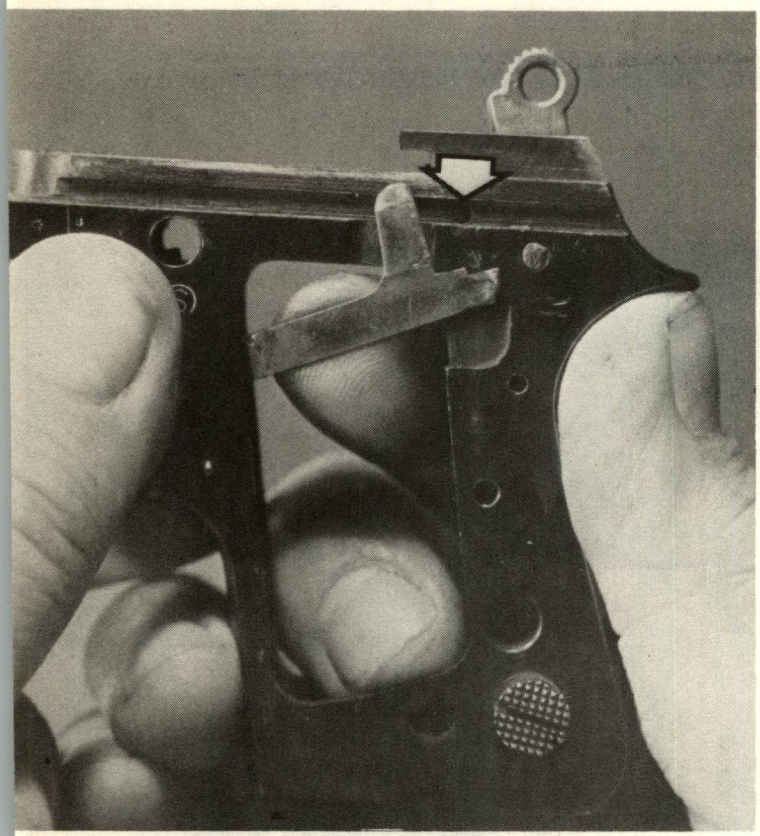
11. On the 22 version, the magazine release button is screw-slotted, and is threaded into the magazine catch piece on the opposite side of the frame. It is simply unscrewed for removal. On the 25, as on most of the Colt versions, the catch button is cross-pinned to the shaft of the catch piece, and driving out this pin will free the button from the catch.



12. Driving out a small cross-pin at lower rear of the trigger will free the magazine safety and its spring. The trigger is also held by a cross-pin, and after this is removed, the trigger is taken out toward the rear, along with its connector bar.



13. When moving the trigger toward the rear, flex the trigger bar very slightly outward to clear the frame. Driving out the pin recessed in the slide track (arrow) will release the sear and its spring, and the large pin at upper rear of the frame is drifted out to free the hammer. Directly below the hammer pin is a small hole through which a small screwdriver can retard the hammer spring while the hammer is removed. **Caution:** *When releasing the hammer spring, use extreme care.*



Reassembly Tips:

When replacing the hammer in the frame, use a drift to compress the hammer spring and follower, and hold it in place with a small screwdriver inserted in the hole in the left of the frame below the hammer pin hole. After the hammer is in place and the pin installed, cock the hammer and remove the screwdriver.

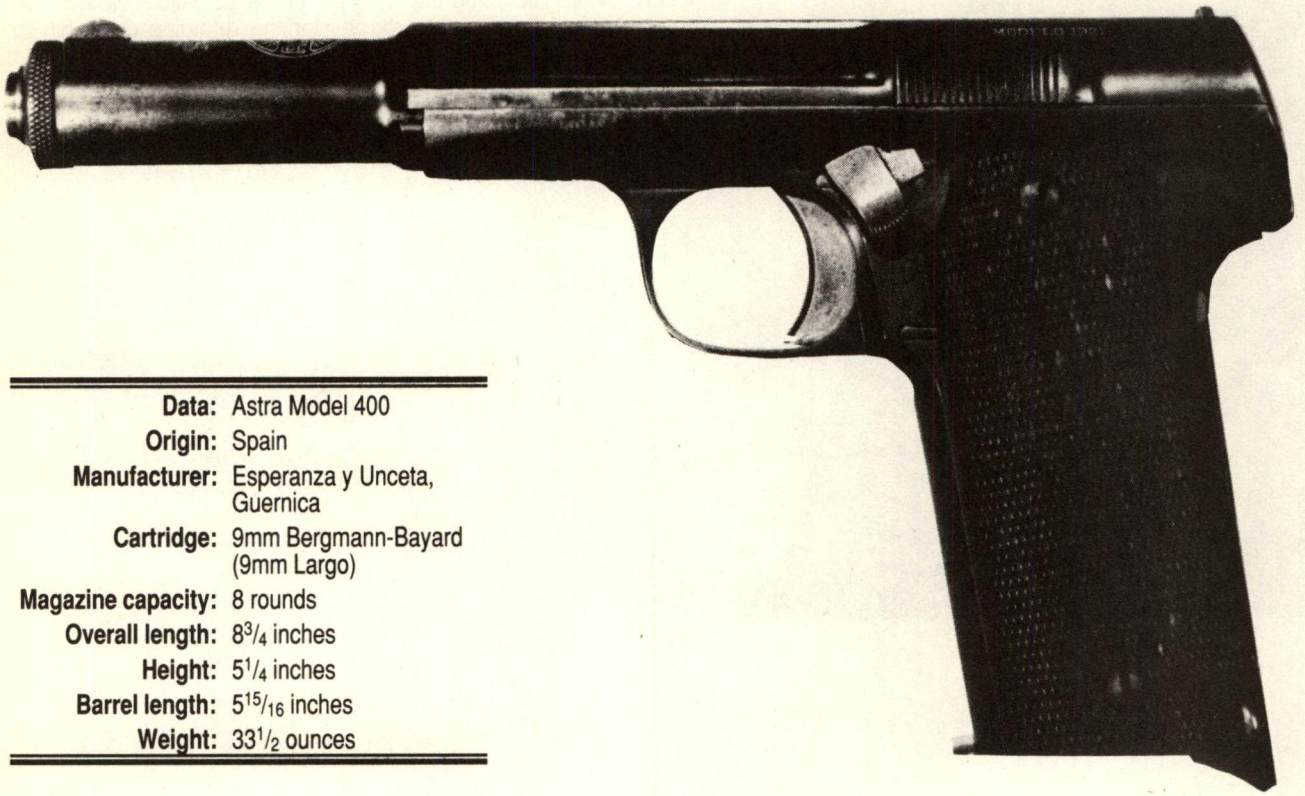
When replacing the firing pin in the 22-caliber version, be sure it is oriented properly for the retaining cross-pin to engage the notch in the firing pin.

Astra 400

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Astra Model 400 also apply to the following guns.

Astra Model 300 **Astra Model 600**

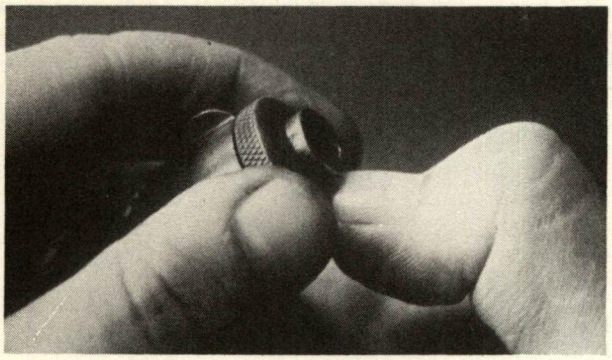


Data:	Astra Model 400
Origin:	Spain
Manufacturer:	Esperanza y Unceta, Guernica
Cartridge:	9mm Bergmann-Bayard (9mm Largo)
Magazine capacity:	8 rounds
Overall length:	$8\frac{3}{4}$ inches
Height:	$5\frac{1}{4}$ inches
Barrel length:	$5\frac{15}{16}$ inches
Weight:	$33\frac{1}{2}$ ounces

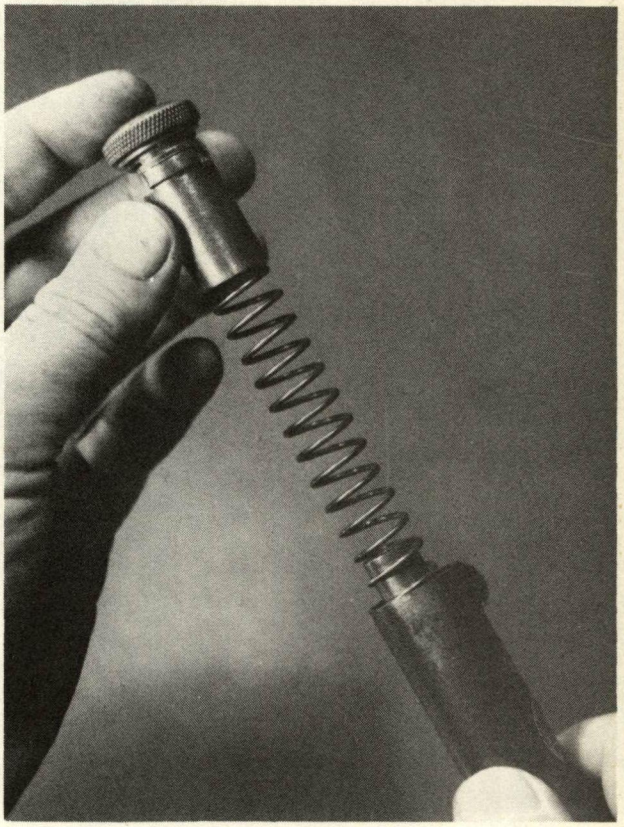
The Model 400 is also called the Model 1921, after the year of its adoption for use by the Spanish military. A shorter version, the Model 600, was chambered for the 9mm Luger round, and a smaller pistol, the Model 300, was made in 380 ACP and 32 ACP chamberings. The Model 600 and Model 300 had a different magazine catch, but they are otherwise mechanically identical to the Model 400 and the same general instructions apply.

Field Strip:

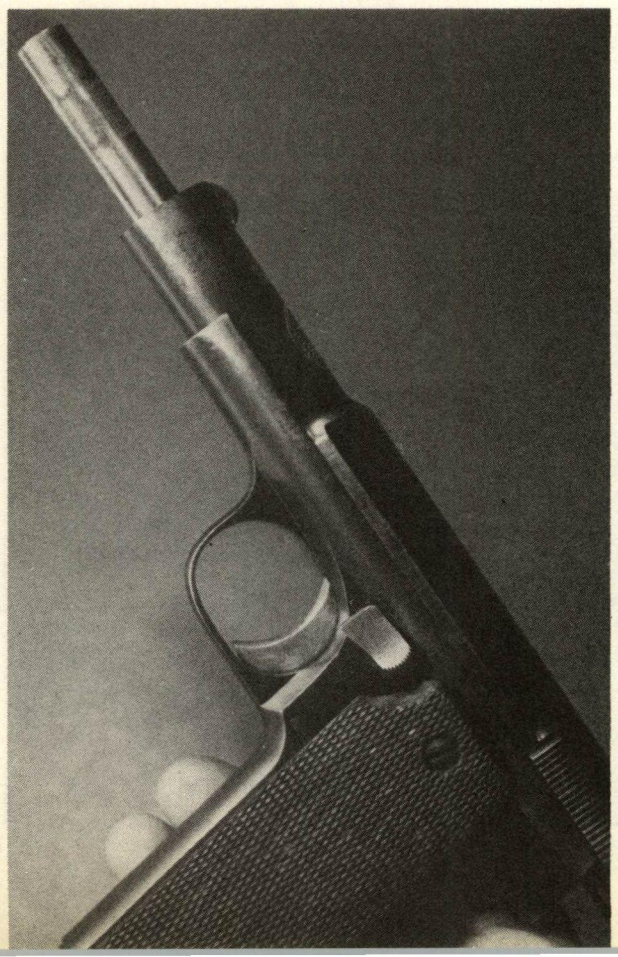
1. With the hammer down and the magazine removed, use a strong thumbnail or some other non-marring tool to depress the collar that surrounds the barrel at the muzzle. While holding the collar in, turn the knurled bushing at the front of the slide until the recoil spring forces the bushing and collar out toward the front. **Caution:** *The Model 400 has an extremely strong recoil spring, so keep a firm grip on the bushing as it is turned, aim it away from the face, and ease it out of the slide.*



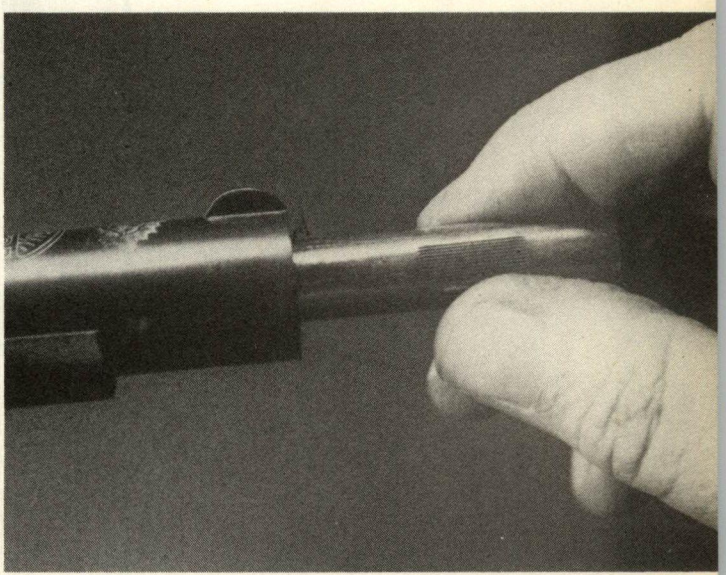
2. Remove the bushing, barrel sleeve (collar) and recoil spring toward the front.

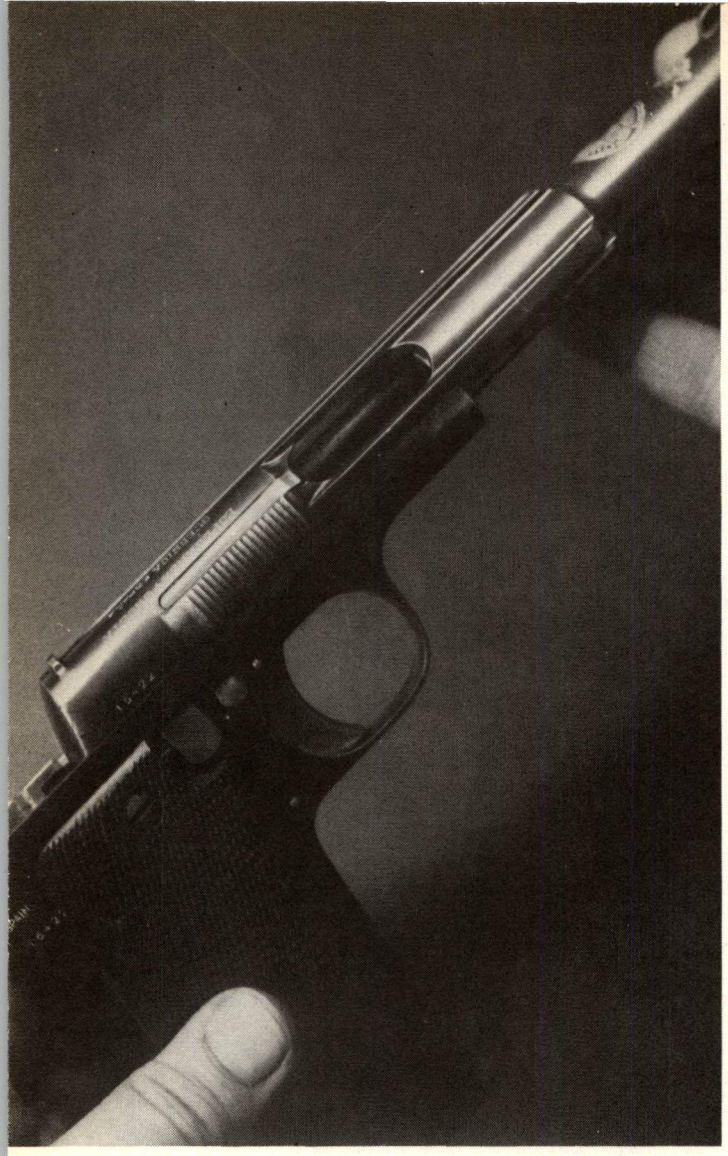


3. Move the slide all the way to the rear, then move it forward while pushing the safety-lever upward toward the rear, to the on-safe position. The inner arm of the safety-lever will catch and hold the slide in the position shown.

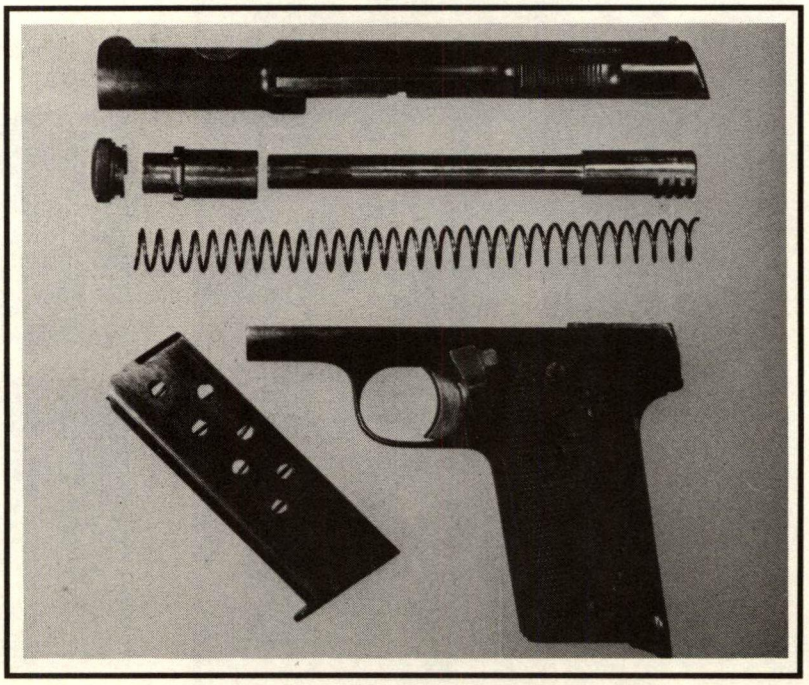


4. Turn the barrel to the left (front view) as far as it will go.





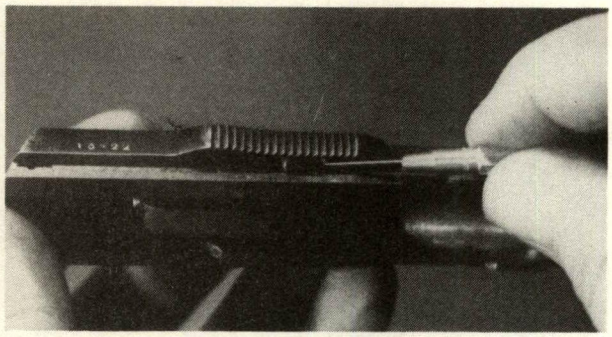
5. Pull the slide to the rear to clear the safety, or manually turn the safety down to the off-safe position, and run the slide assembly forward off the frame. Turn the barrel until its retaining lugs are visible at the underside of the slide, and remove it toward the front. **Gun is now field-stripped.**



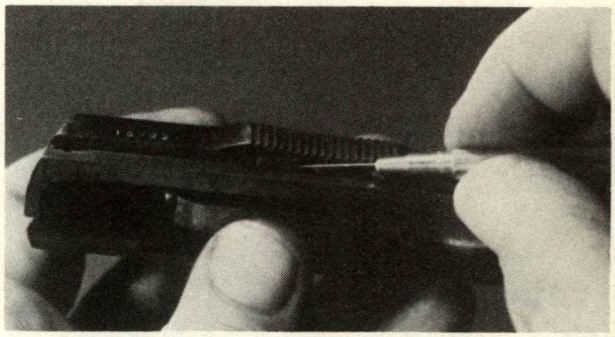
Astra 400 field-stripped

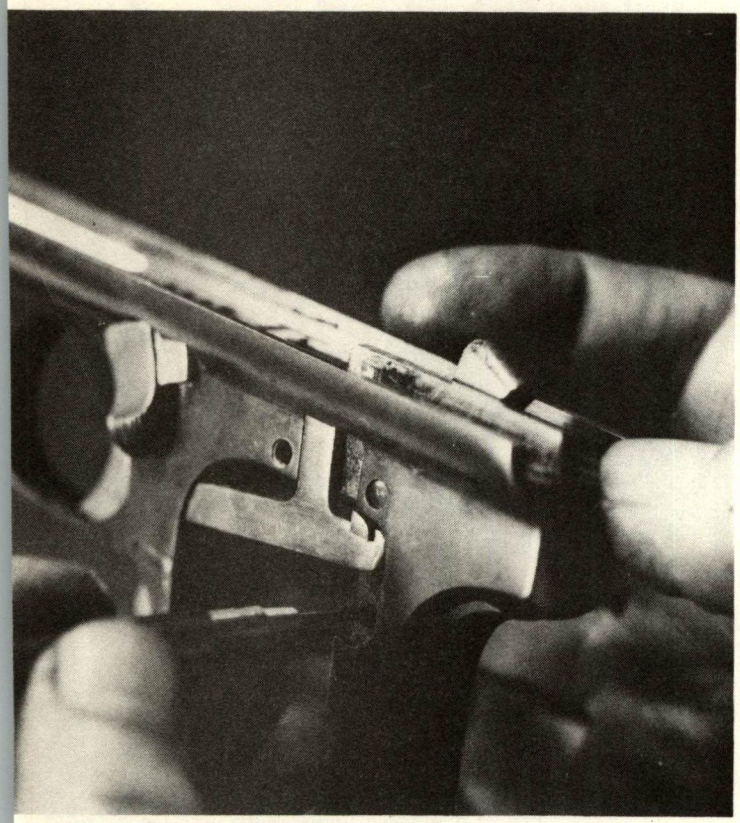
Detail Strip:

6. Most pins in the Model 400 are L-shaped, with a right-angled head extension to keep them in place and aid removal. There are two pins in a recess below the slide retracting serrations on the right side. Pry out the front pin to release the extractor and its spring for removal.

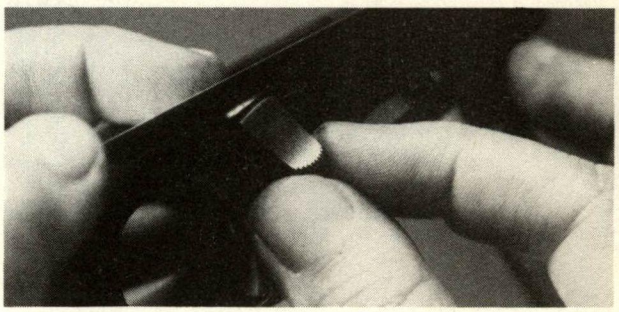


7. Prying out the rear pin will release the firing pin (two sections) and its spring for removal toward the rear of the breechblock.



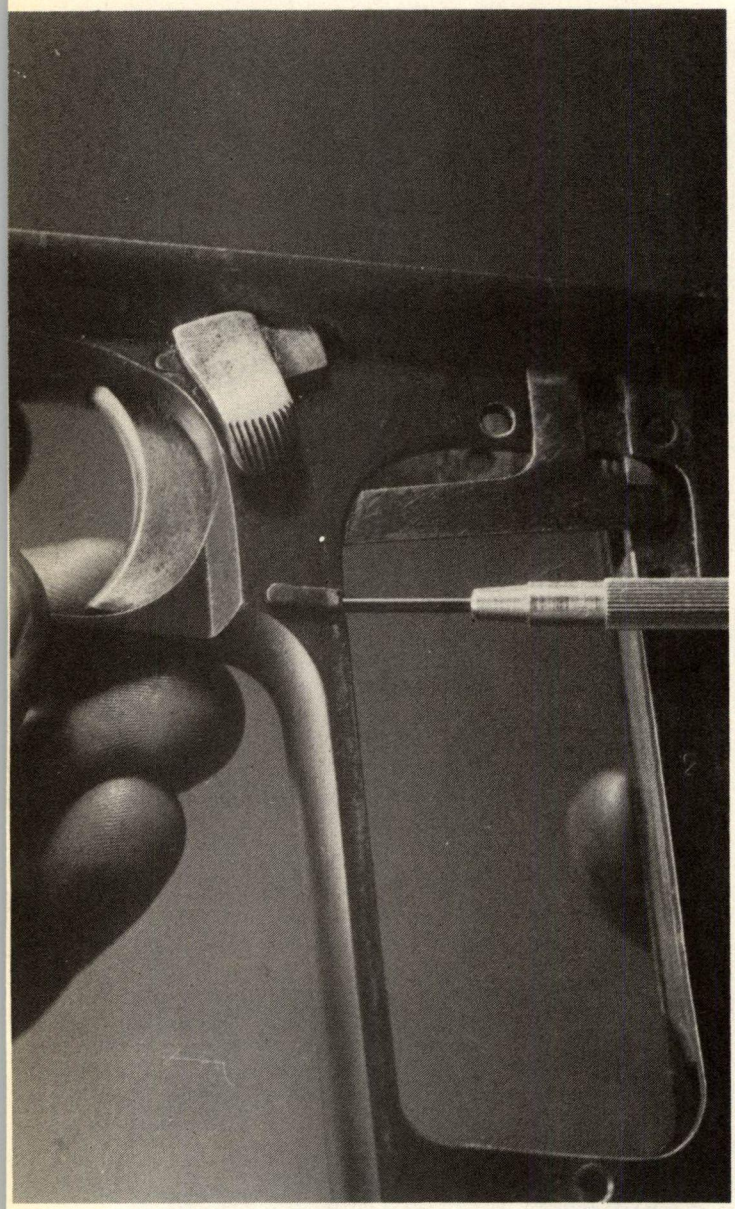


8. After removing the grip panels, cock the hammer and insert a small tool into the hole on the left side of the frame, just below the rear tip of the trigger bar. Restrain the hammer, pull the trigger to release it, and let it down slowly. If the tool has been inserted to the proper length, the hammer spring and plunger will be trapped in the frame and tension on the hammer relieved. The hammer pivot can be drifted out the right and the hammer removed from the top of the frame. Note that the right end of the hammer pivot pin is also the base for the slide hold-open spring, and this spring can also be removed in this operation. To remove the mainspring and plunger, insert a tool into the top of the frame to bear firmly on the plunger, depress it slightly, and remove the keeper tool from the hole on the left side. **Caution:** *The spring is under tension. Use care, and ease the spring and plunger out for removal toward the top of the frame.*

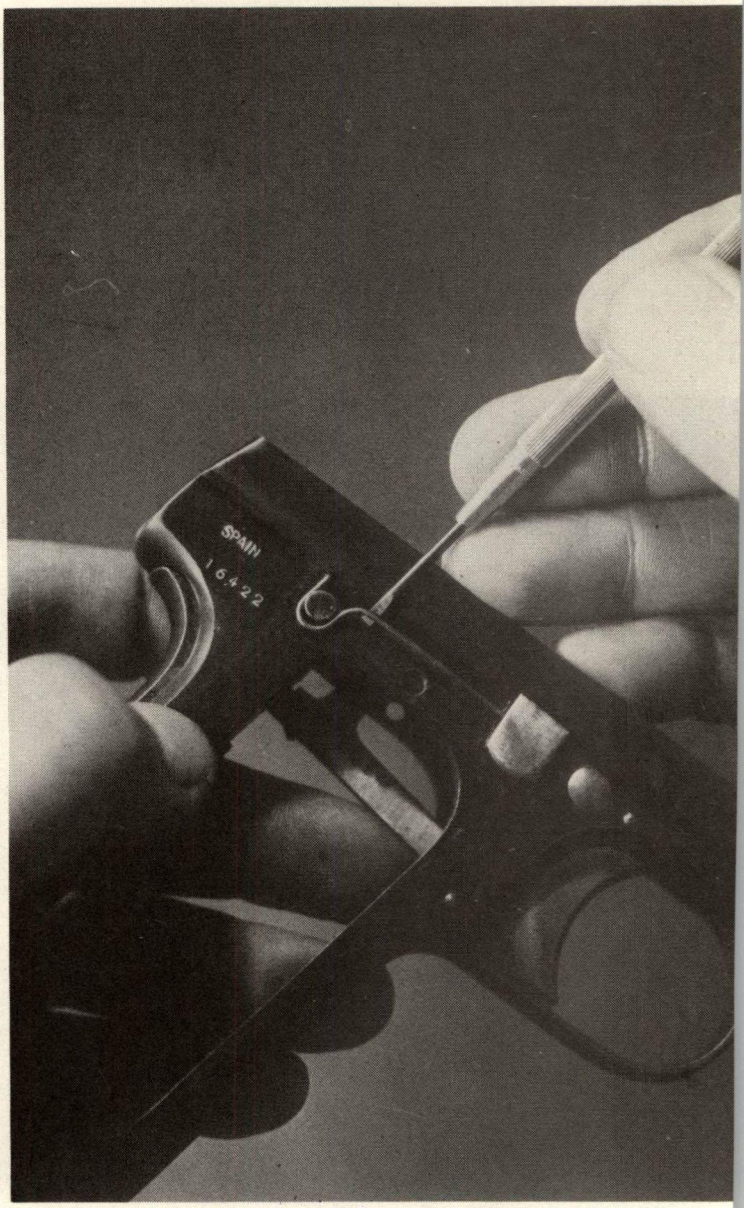


9. With the safety-lever in the off-safe position, remove it by simply pushing it toward the left side and taking it out of the frame. **Caution:** *As the safety is taken out, its spring and plunger will be released from a vertical hole in the top right of the frame. Hold a fingertip over the hole to restrain them, as shown, then remove them from the frame.*

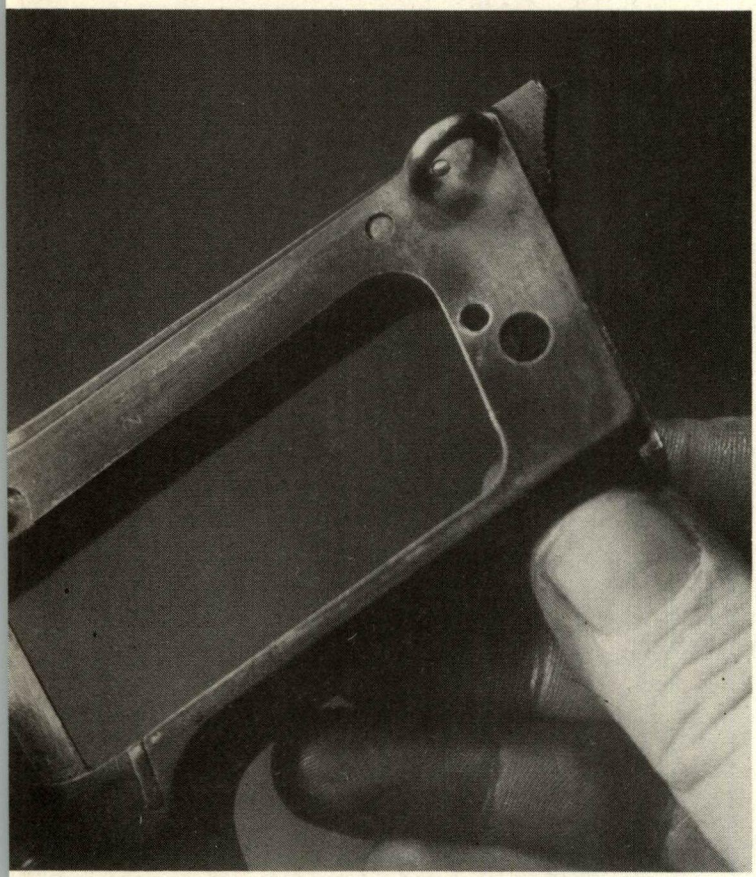
10. With a small screwdriver, pry out the pin at the lower rear of the trigger and remove it toward the left. This will release the magazine safety and its spring to be removed to the rear, into the magazine well.



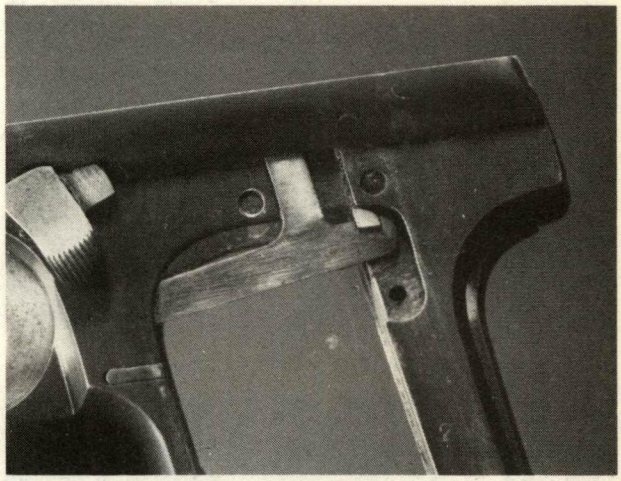
11. If the hammer pivot has not been removed, pry the slide hold-open spring out and down, and detach it from the hold-open block toward the rear. The spring retains the block, and the block can now be slid straight up and out of the frame.

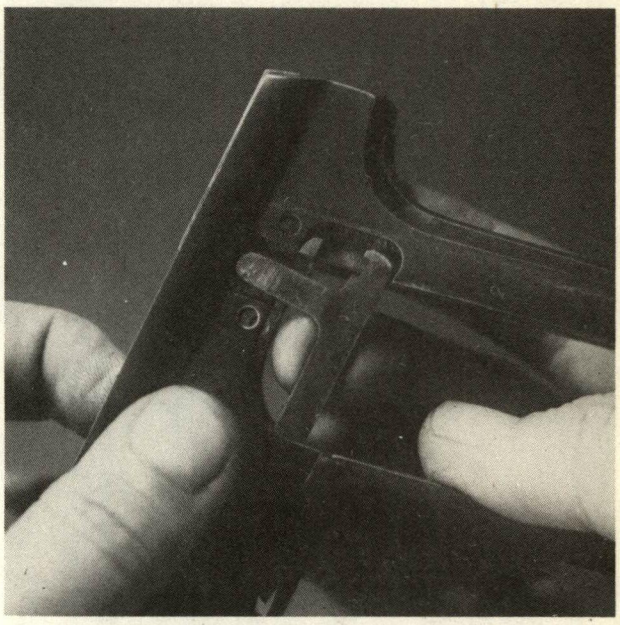


12. The small cross-pin at the lower rear of the grip frame is the limit pin for the magazine latch. It is visible here within the lanyard loop, and its location makes driving it completely out toward the right impossible. Fortunately, it has an enlarged head on the right side, and it is only necessary to start it with a punch. It can then be pried out and removed with the fingers on the right side. The larger pin retains the magazine catch and grip safety. Drift it out to the right and remove the catch and grip safety downward.



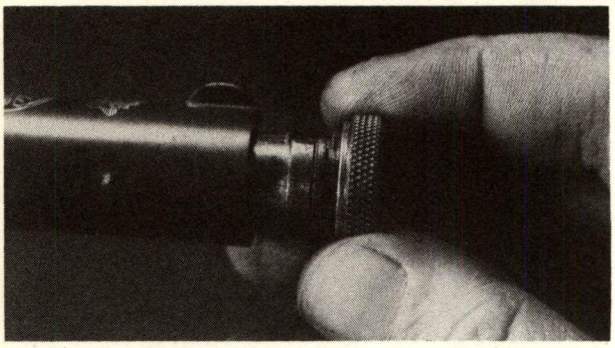
13. After the hammer has been removed, only the step at the rear tip of the trigger bar keeps the sear and sear spring in the frame. Pull the trigger bar downward and slide the sear forward into the magazine well, along with the small coil spring behind it.





14. After the safety-lever has been removed, the trigger pin can be pried out toward the left, and the trigger and trigger bar moved to the rear for removal. It will be necessary to spring the trigger bar slightly out (toward the left) to clear the side of the frame as the trigger assembly is moved to the rear. When the trigger is out of the gun, the small pin at the lower rear of the trigger can be drifted out to free the trigger bar. **Caution:** *This will also free the plunger and spring from inside the trigger, and the spring is under compression. Restrain them from escape, and ease them out.*

Reassembly Tips:



1. When replacing the barrel bushing and barrel collar or sleeve, align their locking lugs on each side before pushing the assembly into the slide. If this is done, they can be pushed straight in, the bushing turned, and the collar will move forward to lock it in place.

2 When replacing the safety in the frame, use a small screwdriver to depress the safety spring and plunger, holding them down while the safety is pushed in toward the right.

Note that all of the L-pins are not of the same size or length. Keep them with the parts they retain during disassembly, to insure that they will be used again in the right location.

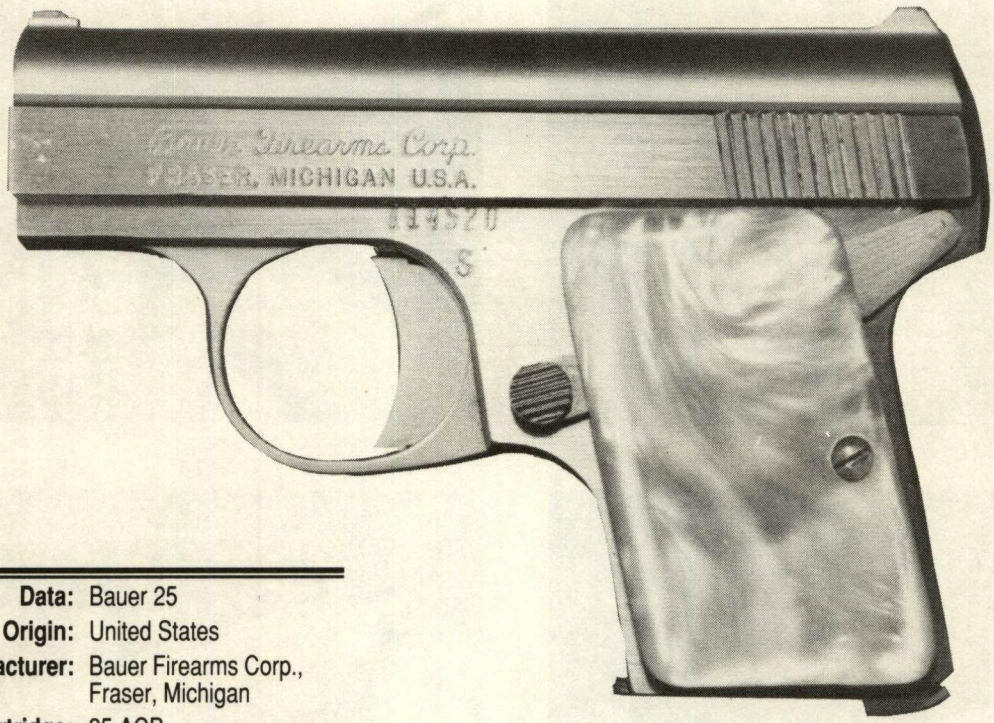
During reassembly, take care when compressing the main-spring (hammer spring) and recoil spring, as both are extremely strong. If accidentally let go they could cause physical harm.

Bauer 25

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Bauer 25 also apply to the following guns.

Browning "Baby" 25 **Fraser** **PSP-25**

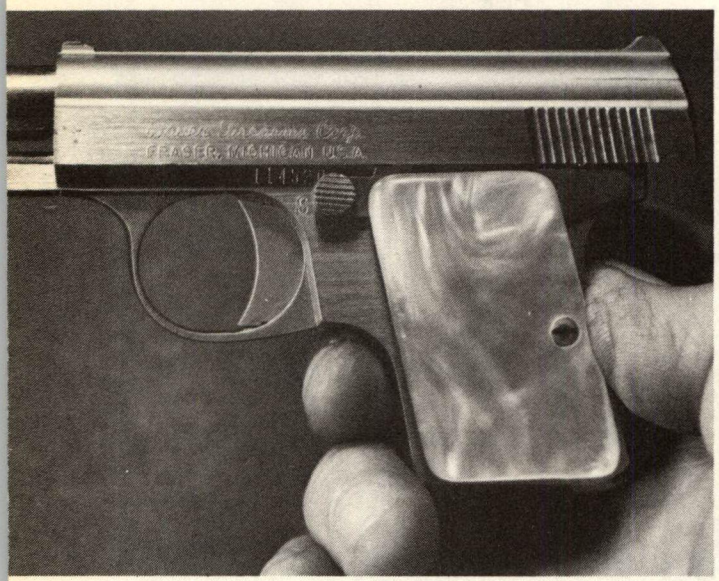


Data:	Bauer 25
Origin:	United States
Manufacturer:	Bauer Firearms Corp., Fraser, Michigan
Cartridge:	25 ACP
Magazine capacity:	6 rounds
Overall length:	4 inches
Height:	$2^{13}/_{16}$ inches
Barrel length:	$2^{1}/_{8}$ inches
Weight:	10 ounces

Essentially, the Bauer is a stainless-steel copy of the Browning "Baby" pistol, and most parts will interchange. The Browning is still being made and sold in Europe, but the GCA of 1968 stopped importation into the U.S. The Bauer company closed several years ago, and the actually manufacturer of the pistol continued production of the gun as the Fraser for a few years. Currently, a firm called Precision Small Parts is making the same pistol under an agreement with FN, and it is sold in America as the PSP-25 by KBI, Inc. of Harrisburg, PA. The instructions apply for all of these pistols.

Field Strip:

1. Move the slide back about $^{5}/_{16}$-inch, and lock it in place by swinging the manual safety upward.

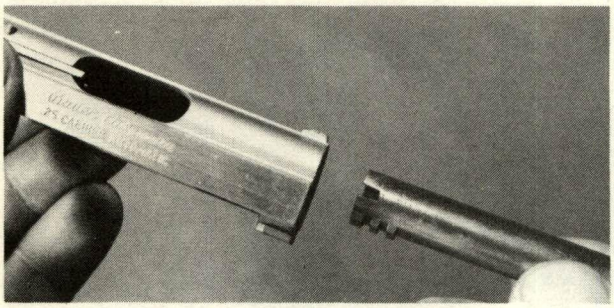


2. Turn the barrel clockwise (viewed from the front) until its locking lugs are visible in the ejection port.

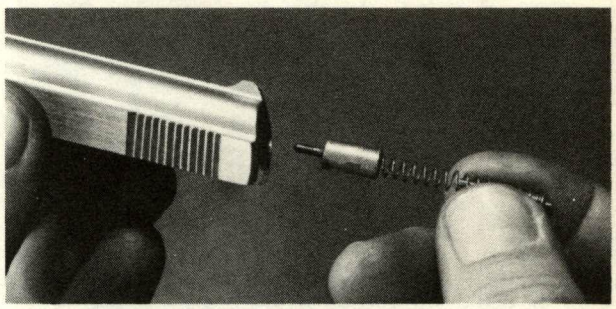
3. Release the safety and move the slide and barrel forward about $^{3}/_{16}$-inch, enough to clear the striker base at the rear and the slide underlug at the front.

4. Lift the slide and barrel off the frame.

5. Turn the barrel back to its original position, and pull it out the front of the slide.



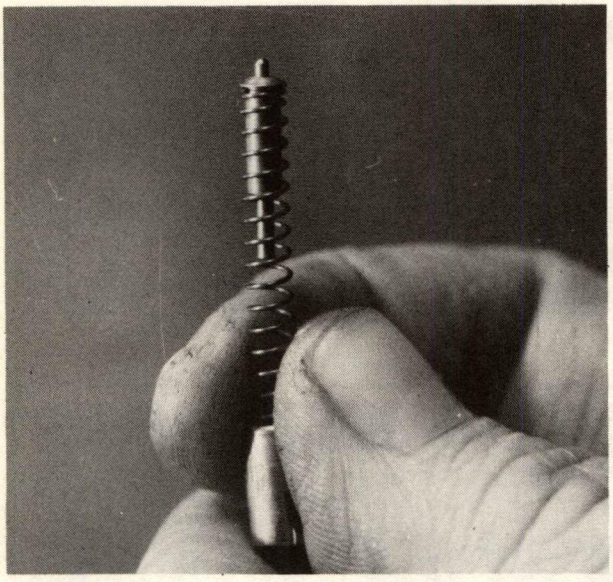
6. Remove striker, striker spring, and spring guide/cocking indicator from the rear of the slide.**Gun is now field-stripped.**



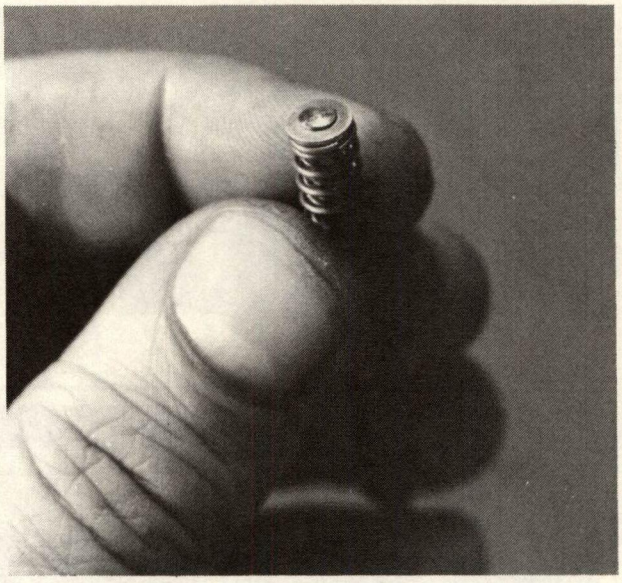
Bauer 25 field-stripped

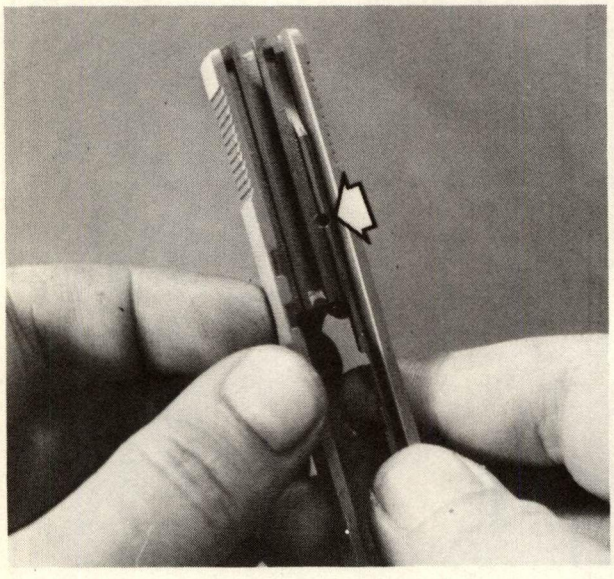
Detail Strip:

7. The spring is easily removed from the striker and guide. The combination guide/cocking indicator assembly is rolled at the end to contain its spring and pin in the sleeve, and any attempt at disassembly will usually ruin it. Don't do it!

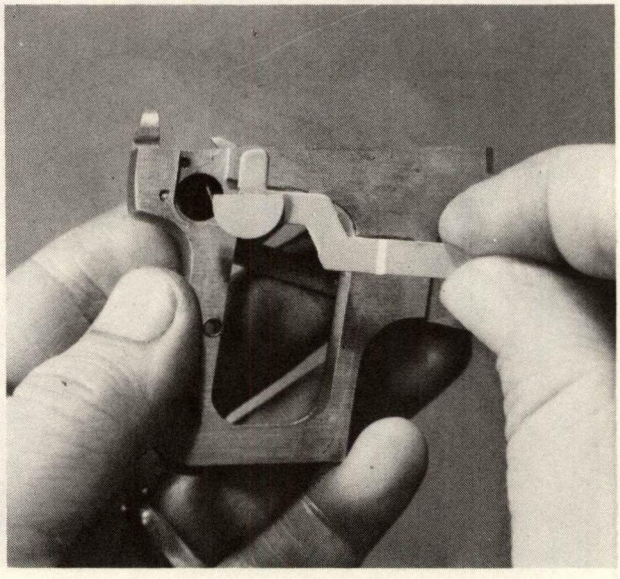


8. The recoil spring assembly consists of two springs, concentrically mounted on a guide shaft, and an end washer. The washer is staked in place to hold the springs on the unit, and if the riveted end is cut off for removal, a new guide rod will be necessary.



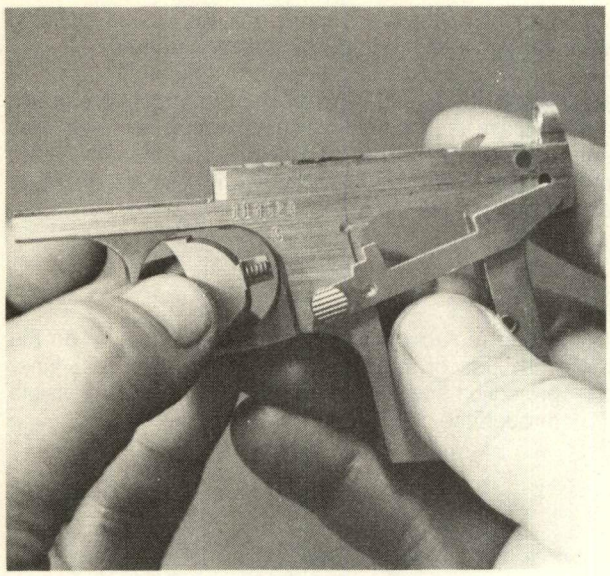


9. The extractor is retained by a vertical pin in the slide (arrow). With a drift of the proper size, drive the pin out from the inside of the slide to release the extractor and its spring.

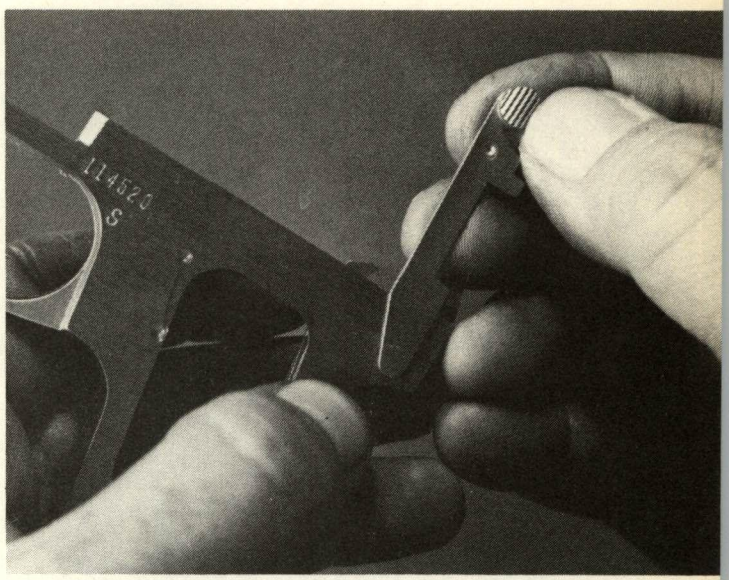


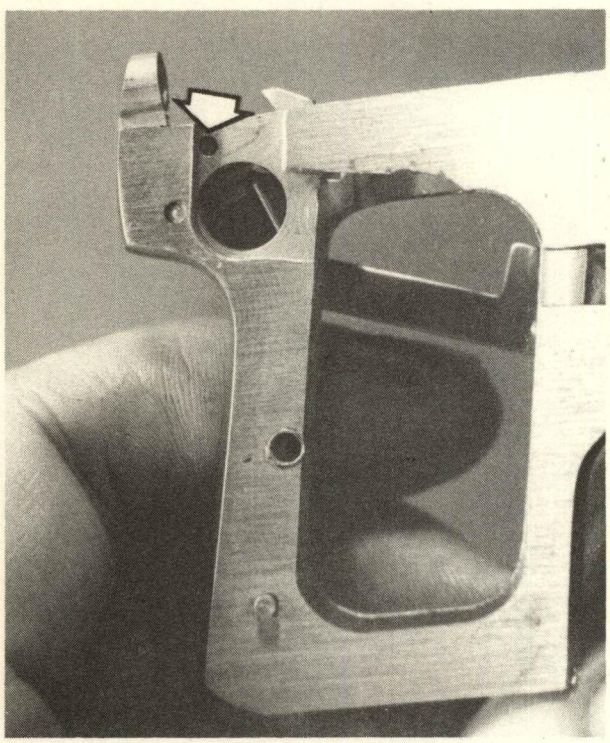
10. Remove the grips and pull the trigger bar disconnector straight out from the right side of the frame.

11. Removal of the trigger bar will also release the trigger, allowing it to move forward for easy removal. Take care not to lose the small trigger spring.

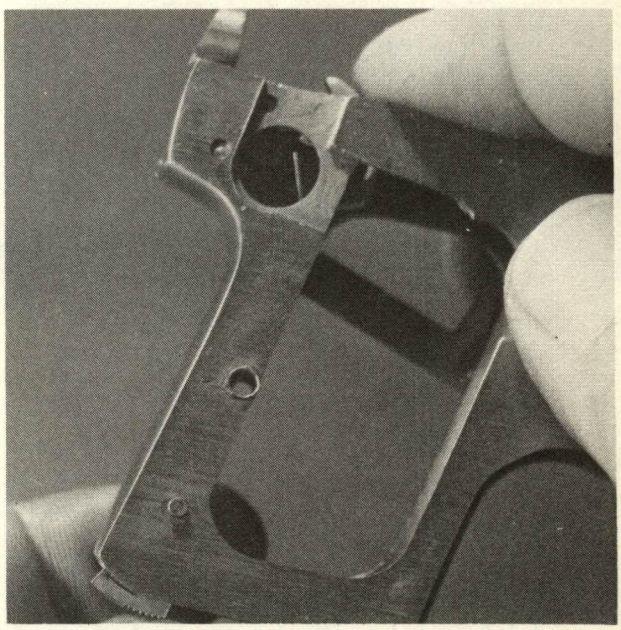


12. Before removing the safety-lever, take note of the position of the combination sear and trigger bar spring inside the frame, as it will be released when the safety is removed. Turn the safety-lever into near vertical position, and pull it out toward the left side of the frame.



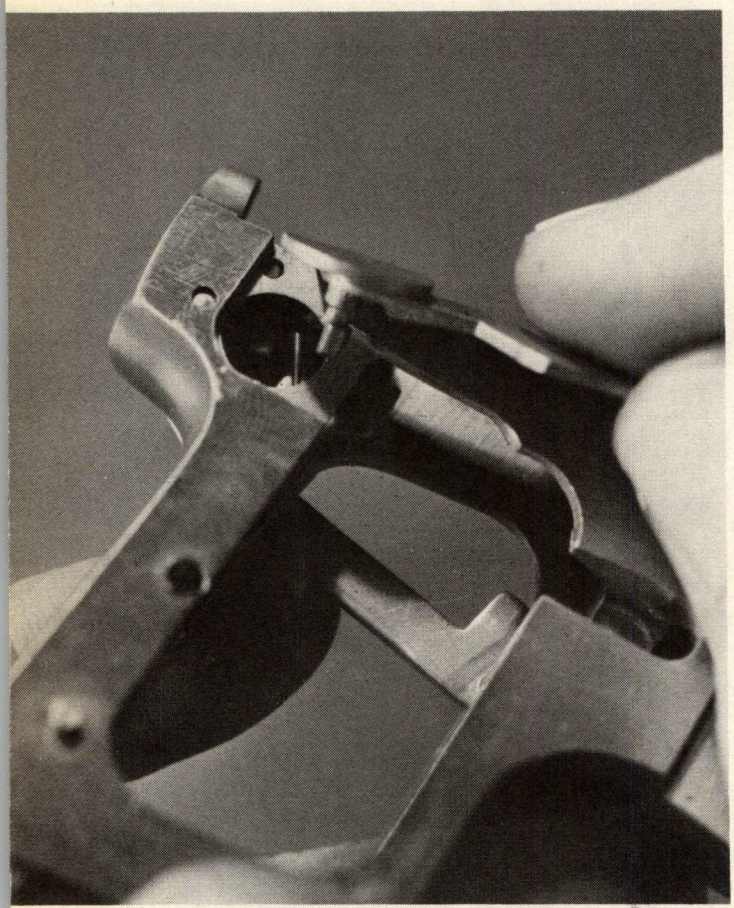


13. The sear pivot has a head on the left side and must be drifted out from right to left to release the sear. The sear is then removed from the top of the frame.



14. Before removing the magazine catch and magazine safety, look through the frame openings and note the position of the combination spring which powers both parts. Drift out the cross-pin at the lower rear of the frame to release the magazine catch, magazine safety, and combination spring. Note that the pin protrudes on each side of the frame, and also stabilizes the grips.

Reassembly Tips:



When replacing the recoil spring unit, the riveted retaining washer goes to the rear, inside the frame tunnel.

Installation of the magazine catch system will be easier if a slave pin is used to hold the catch, magazine safety, and spring together while inserting the pivot pin. Be sure the top of the magazine safety is properly engaged with the sear and stop pin at the top of the frame.

1. When replacing the trigger bar/disconnector on the right side of the frame, be sure that its rear inner projection engages in front of the spring arm, visible through the circular hole in the frame.

Benelli B76

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Benelli B76 also apply to the following guns.

Benelli B77 **Benelli B80** **Benelli MP-3**

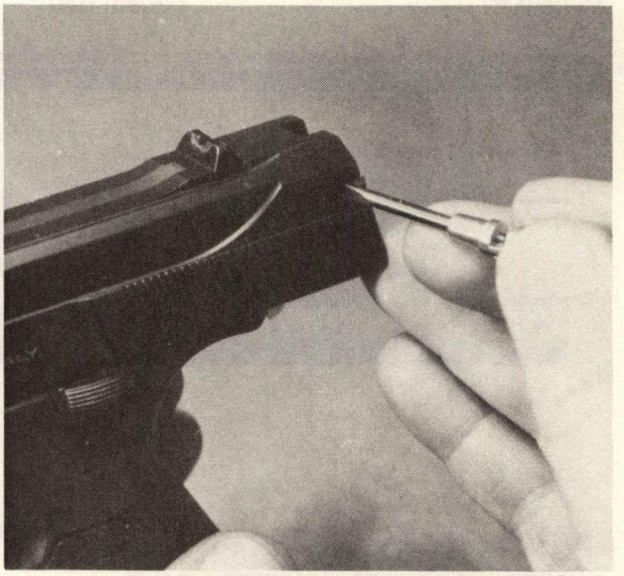
Data:	Benelli Model B76
Origin:	Italy
Manufacturer:	Benelli Armi, Urbino
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	8 rounds
Overall length:	$7^{3}/_{4}$ inches
Height:	$5^{7}/_{16}$ inches
Barrel length:	$4^{5}/_{16}$ inches
Weight:	34 ounces

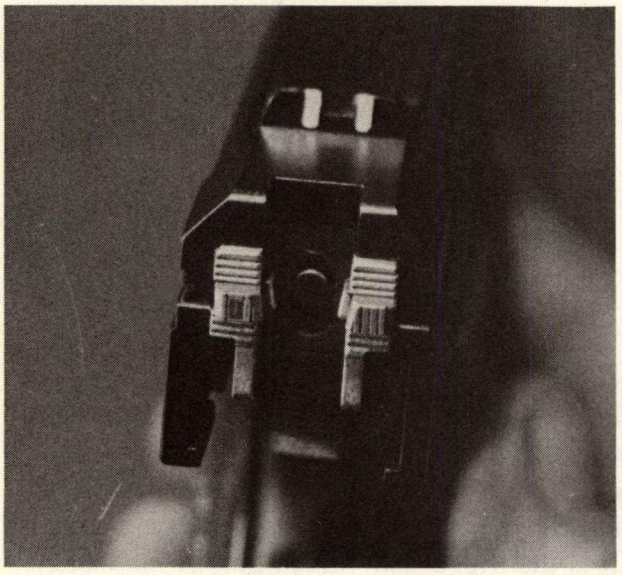
The Benelli has a unique locking system, with a fixed barrel and a separate internal breechblock which is lever-cammed by the slide into a locking recess in the frame. This may sound complicated, but it isn't. Another unique feature of the Benelli is the trigger bar, which pushes the hammer back in double-action firing. In other double-action pistols, this part is usually a drawbar, pulling the bottom of the hammer forward. There are several other internal design points that are unusual, and anyone completely disassembling the Benelli should carefully note the relationship of all parts before beginning takedown. The Benelli pistols in other calibers, the B77, B80, and MP-3, have the same basic mechanism, and the instructions will apply.

Field Strip:

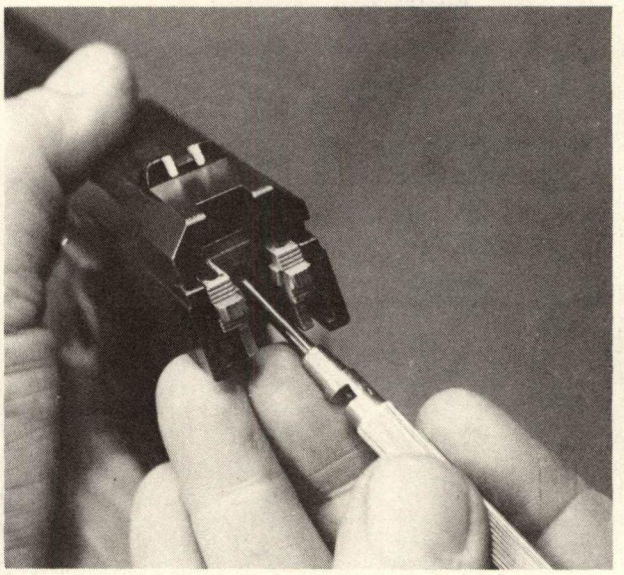
1. Remove magazine, and pull slide all the way to the rear, locking it open by pushing the safety up to the on-safe position.

2. With a small screwdriver or other tool of appropriate size, turn both of the locking-piece support levers inward until they are clear of their recesses in the slide. The rear edge of the magazine bottom can be used for this, but there is a possibility the slide may be scratched, so use of a proper tool is advisable.



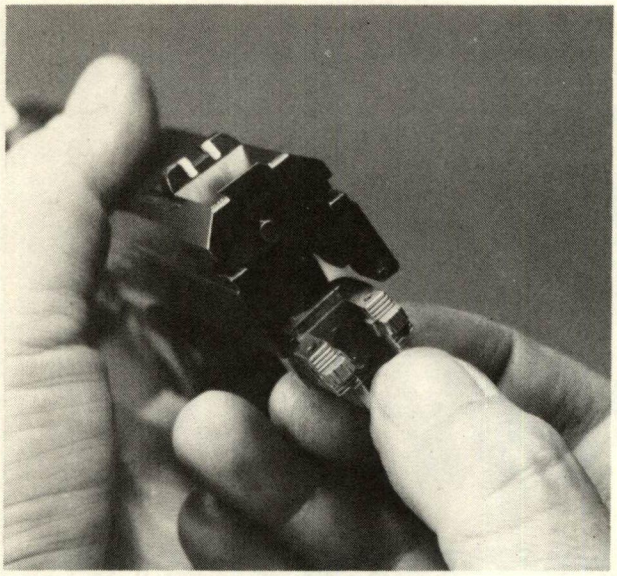


3. When both locking-piece support levers are in position for takedown, they will look like this, from the rear.

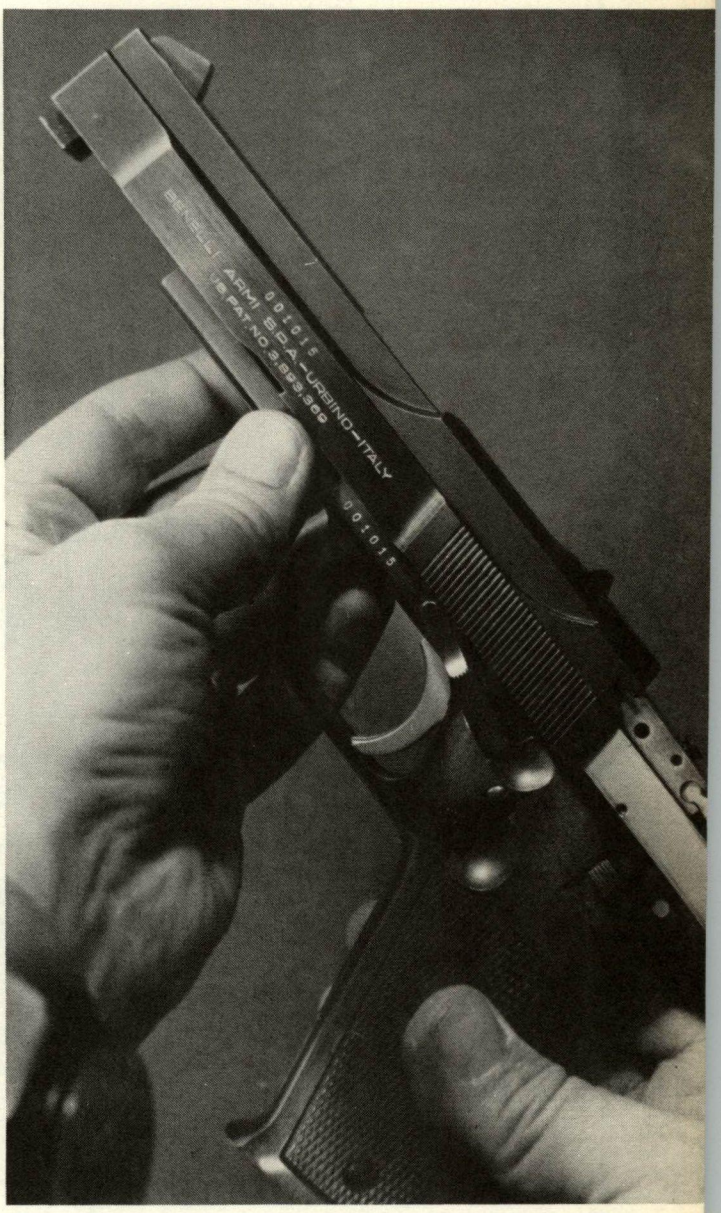


4. With a small screwdriver, a drift punch, or any other tool of appropriate size, depress the firing pin head and move the locking support piece downward.

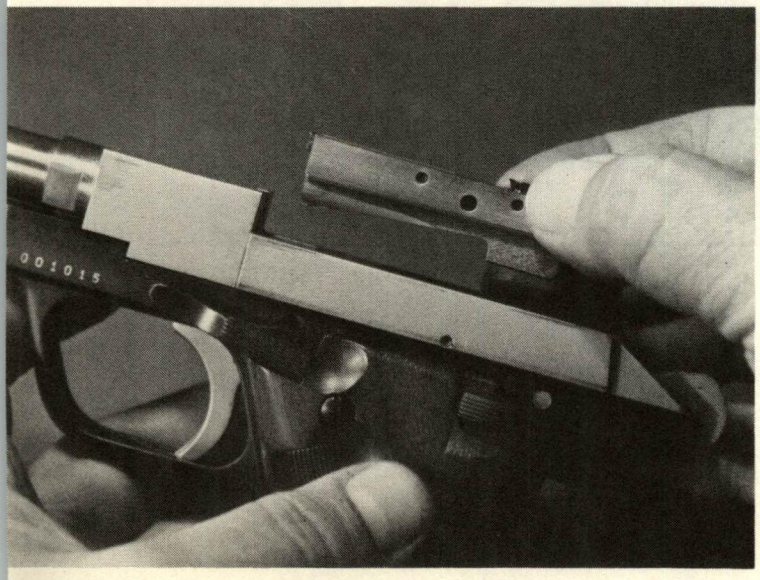
5. Remove the locking-piece support piece from the bottom of the slide. There is a slight possibility that the firing pin may be released at this point, but in most cases it will remain in the breechblock. For safety, cover the area with your hand to prevent the firing pin from flying out of the slide.

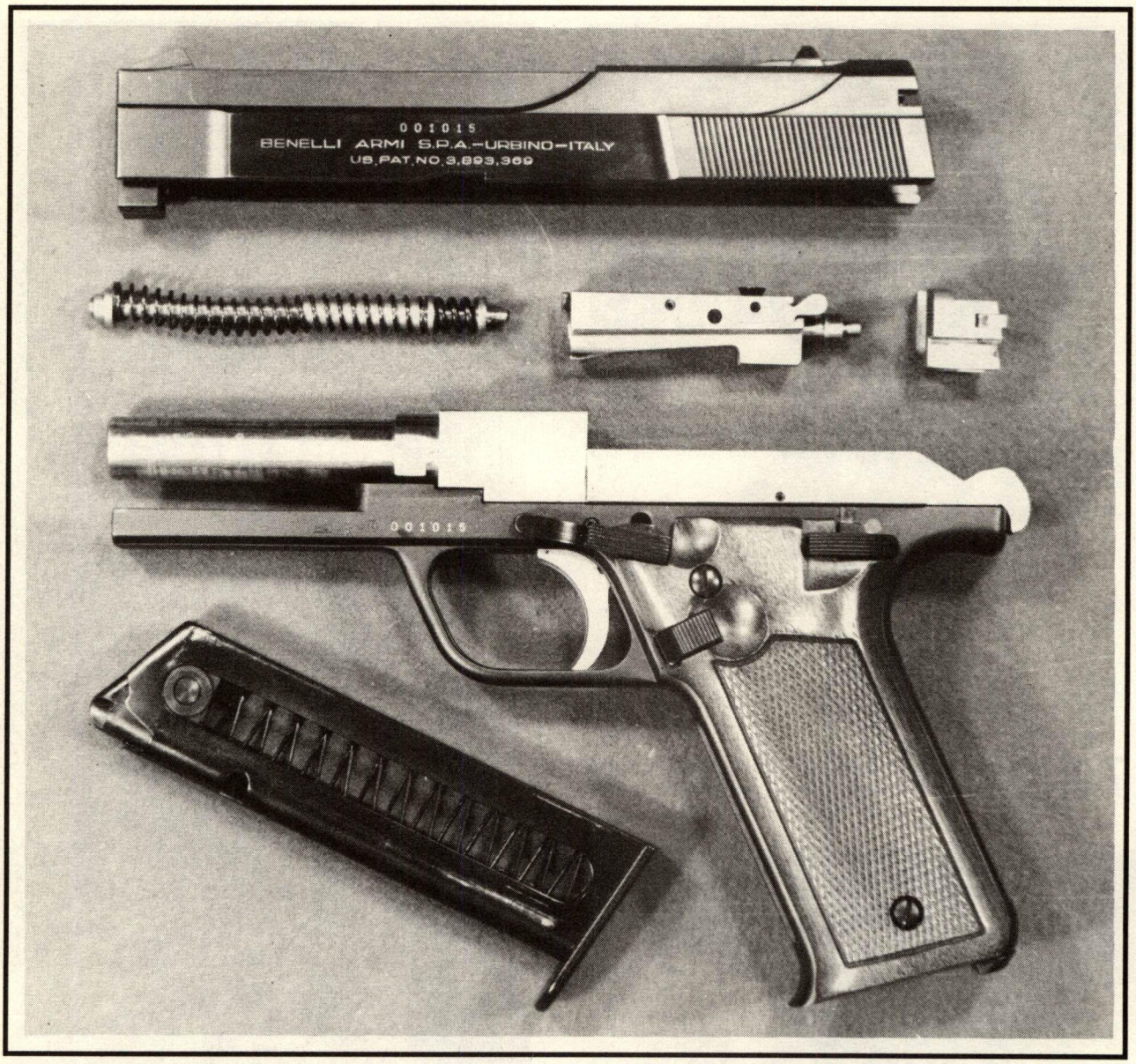


6. Holding the slide against the recoil spring tension, release the safety and allow the slide to run slowly forward off the frame.



7. Lift the breechblock from its locking recess in the frame (actually, the recess is a part of the barrel extension, or sub-frame). **Gun is now field- stripped.**

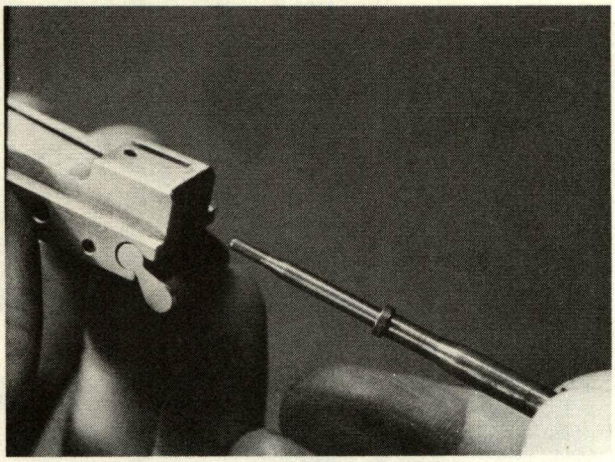




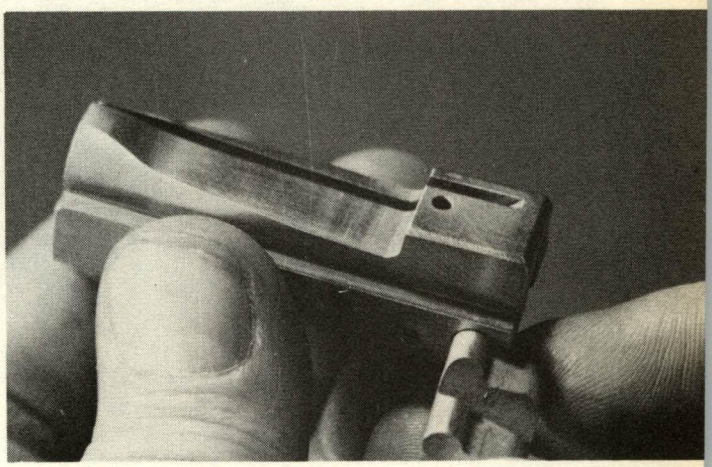
Benelli B76 field-stripped

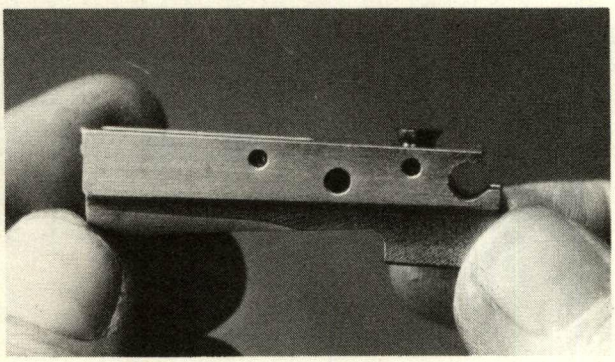
Detail Strip:

8. Rotate the firing pin (either direction) until it moves toward the rear of the breechblock and can be withdrawn. The firing pin spring may or may not come out with the pin, but if not, it should fall from its tunnel when the block is elevated to vertical.

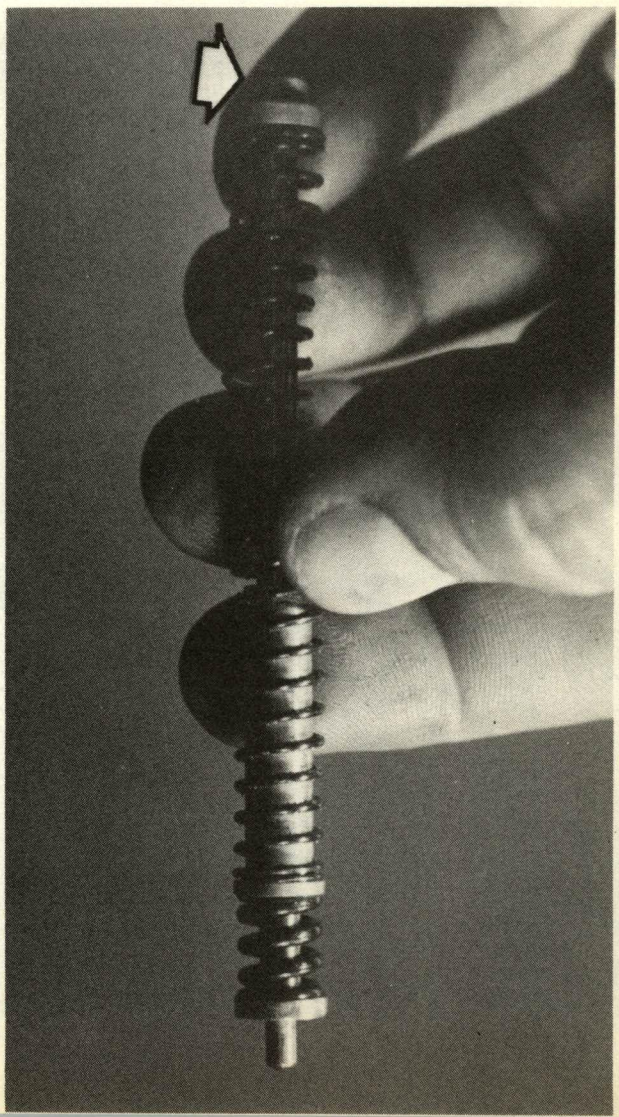


9. The breechblock toggle lever can now be moved out to either side and removed.



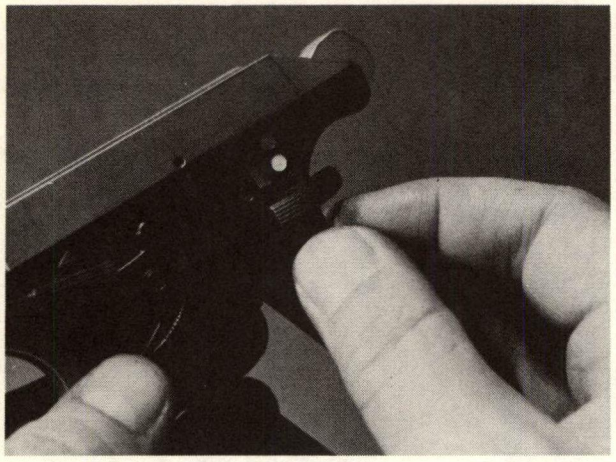


10. Driving out the small pin at the left will release the extractor for removal. The large pin at center is the locking shoulder for the firing pin collar, and need not be removed. The small pin at the right retains the breechblock control stud and its removal isn't necessary as it retains no other part.

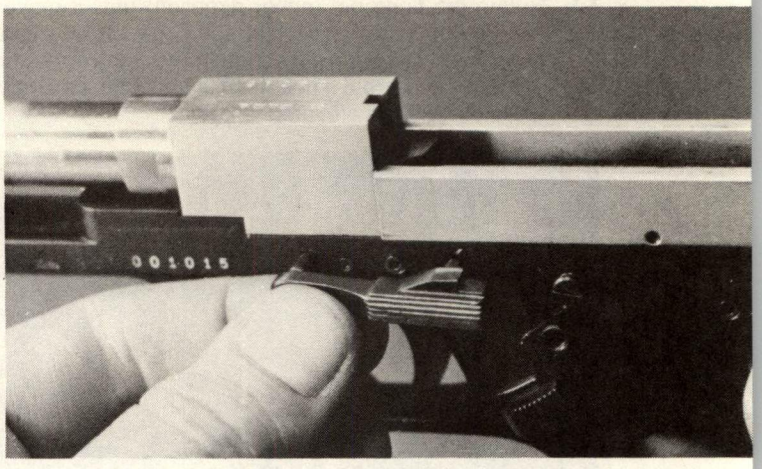


11. The recoil spring system can be dismantled by removal of a small split-ring clip at its forward end (arrow). **Caution:** *Springs are under tension, so remove carefully.* Note the arrangement of the springs and attendant parts before disassembly, to be sure they are replaced in the same order.

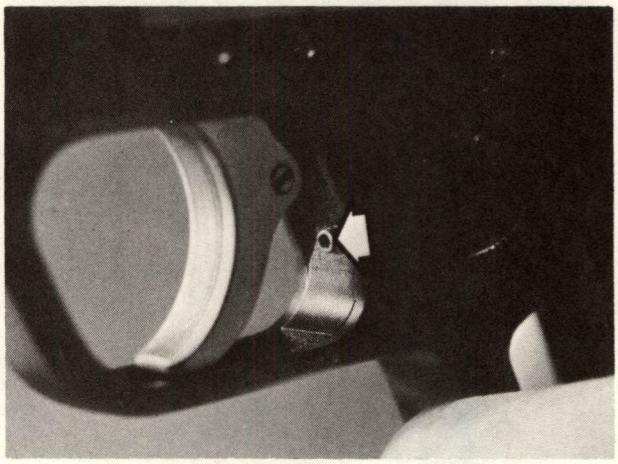
12. After the grips are removed, move the safety down past the off-safe position and lift it off the frame to the left.

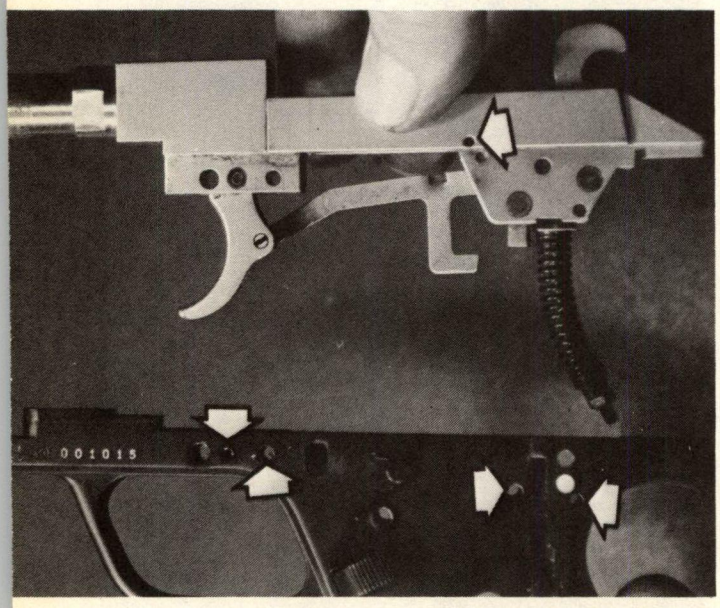


13. Pull the slide latch straight out to the left and remove it. The slide latch spring will slip out of its slot as the latch is removed. The spring is retained on the side of the frame by a single screw.



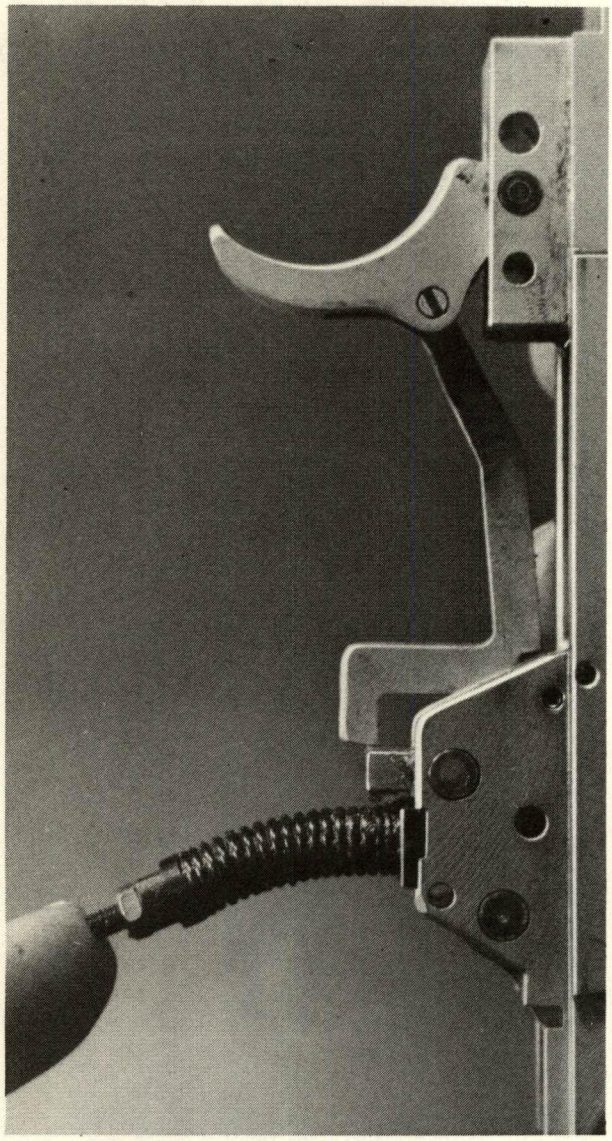
14. The trigger stop screw (arrow) is removable by using an Allen wrench of the proper size, but the level of the screw is set at the factory, and it should not be disturbed unless absolutely necessary.



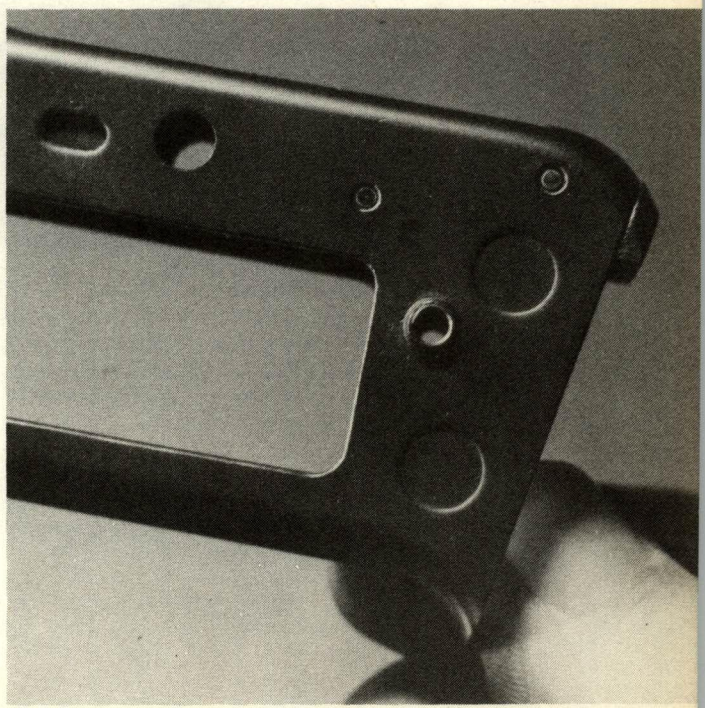


15. After the slide latch is taken off, the removal of five rolled-steel pins will free the sub-frame, which is then taken out upward from the grip frame. Note that the five sub-frame pins are not all the same size or length. Lay them out in order when they are removed, and be sure that each is returned to its original location. One pin passes through the trigger pivot, another is just to the rear of the trigger pivot. A smaller pin is at the top, in the lower edge of the sub-frame at its center. The last two are located on each side of the safety slot in the grip frame. The sub-frame may be tightly fitted, and should be pried gently upward at the front, in the area between the rear portion of the barrel and the top of the grip frame, then at the rear as soon as there is space to insert a tool. The hammer must be cocked for removal. After the sub-frame is clear of the grip frame, it is advisable to lower the hammer by pressing the sear, because the sear spring is mounted in the grip frame, and the sear is easily tripped. Do not let the hammer fall freely—ease it down.

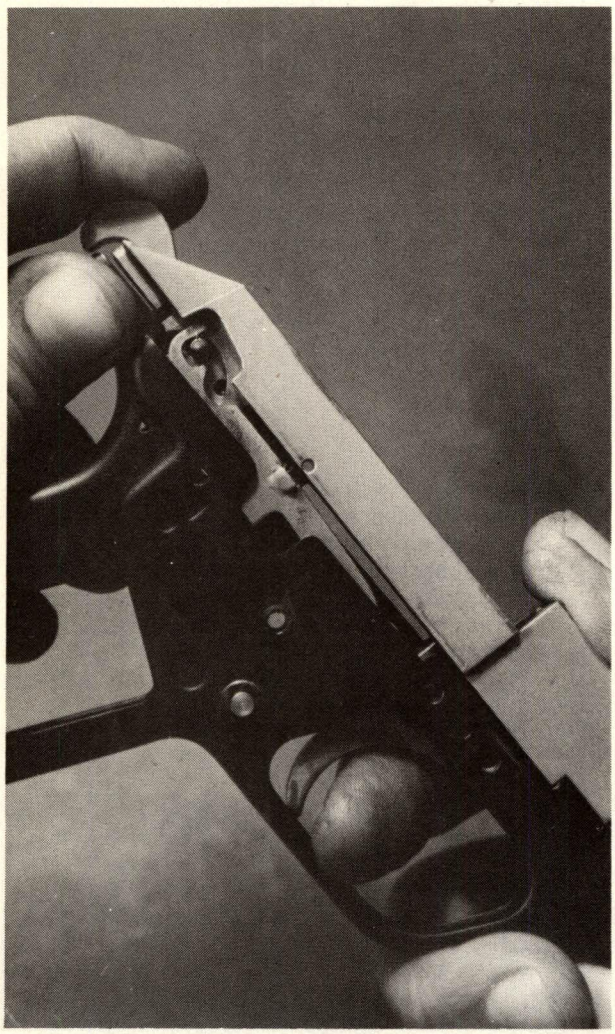
16. A split-end cross-pin holds the trigger spring inside the trigger, and also retains the trigger bar on the right side. The trigger and sear are held by hollow pivot pins, while the hammer has a solid pivot pin at the rear of the sub-frame. All three of these must be pushed out from right to left. Before removing the hammer pin, turn off the hammer spring nut and remove the spring and its collar from the hammer tail, along with the compression plate at the top. A small roll pin near the center pin of the sub-frame holds the ejector. The sear spring is not in the sub-frame, it is mounted in the grip frame.



17. At the lower rear of the grip frame, the upper pin retains the sear spring, the lower one holds an end plug piece. At the upper rear of the grip frame there is a rubber buffer which cushions the hammer during recoil, and this buffer is easily pried from its recess. The magazine release is retained by a split-ring spring clip on the right side. When this clip is forced off its groove in the end of the magazine catch crosspiece, the round, curved, catch-spring comes off to the right, and the catch is removed to the left.



Reassembly Tips:

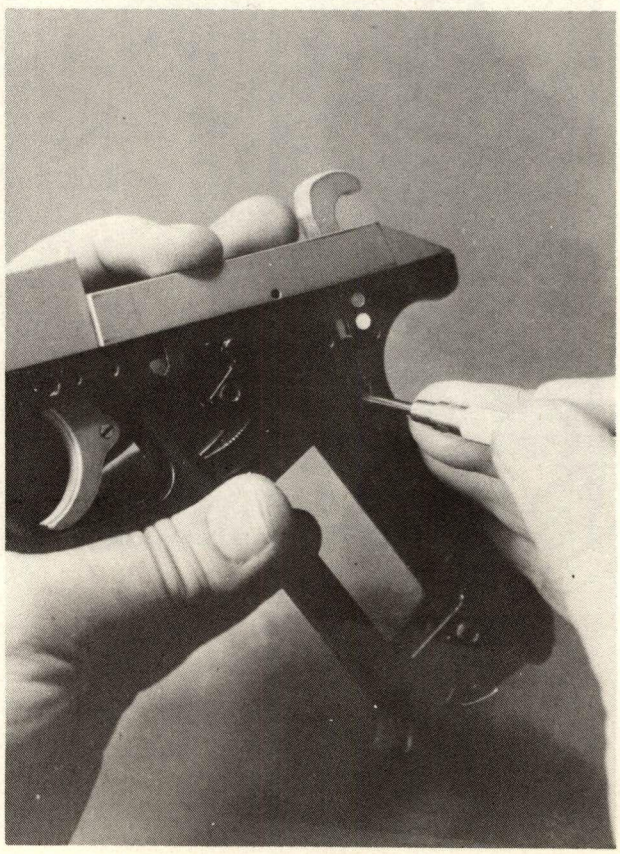


1. When replacing the sub-frame unit in the grip frame, cock the hammer, setting the sear in place (forward) by hand. Push the trigger bar down to disengage it from the sear, and pull trigger all the way to the rear, holding it there. Insert the hammer spring assembly into the grip frame, being sure that the sear spring engages properly behind the sear. Press the sub-frame down at the rear, then at the front, fitting it to its steps in the grip frame. Make final adjustments by tapping it gently into place with a nylon or plastic hammer, but use no extreme force.

Although the barrel is removable by unscrewing with a metric wrench of the proper size, taking it out of the sub-frame is not advisable. If it has been removed, take care that it is turned back in to the proper depth, precisely aligning the extractor recess at the top with the matching recess in the barrel block on the sub-frame.

When replacing the slide latch, cock the hammer to clear the trigger top from the slide latch tunnel in the frame.

2. To insure that the sear spring properly engages the sear, insert a small tool through the safety-lever opening in the grip frame, and pry the spring slightly toward the rear while pushing the sub-frame into place.



Beretta 84

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Beretta Model 84 also apply to the following guns.

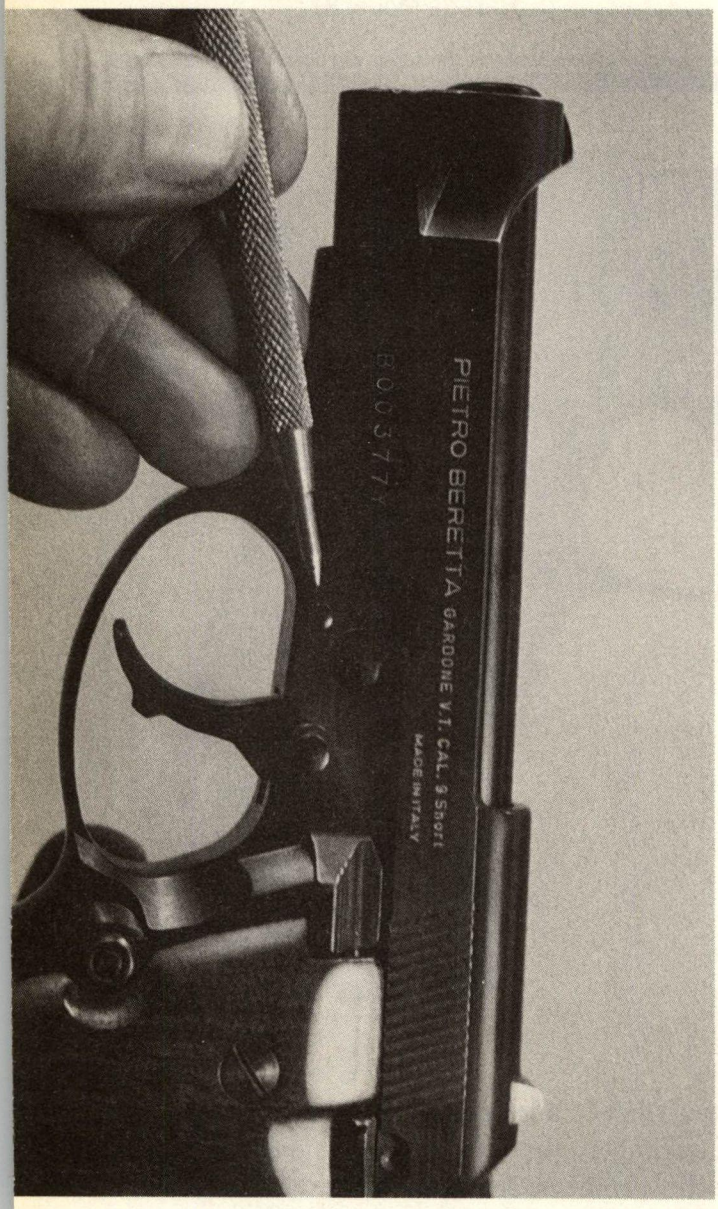
Beretta Model 81 **Beretta Model 85** **Beretta Model 87**

Data:	Beretta Model 84
Origin:	Italy
Manufacturer:	Armi Beretta S.p.A, Gardone (Brescia)
Cartridge:	380 ACP
Magazine capacity:	13 rounds
Overall length:	$6\frac{3}{4}$ inches
Height:	$4\frac{3}{4}$ inches
Barrel length:	$3\frac{7}{8}$ inches
Weight:	23 ounces

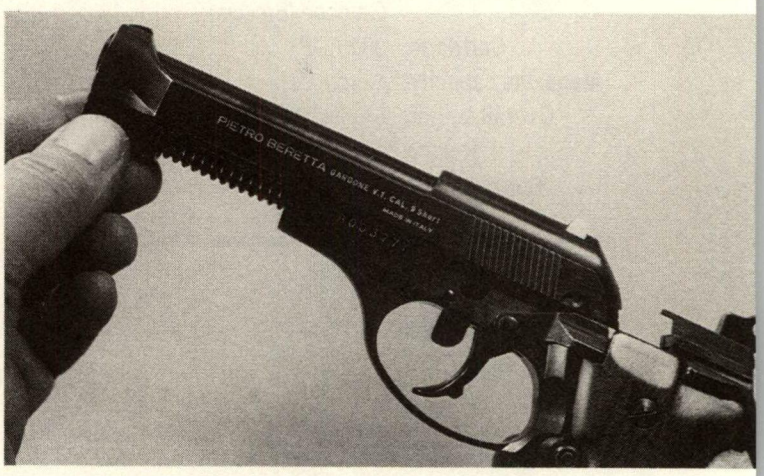
The Beretta Model 84 combines the traditional Beretta style with a number of modern design innovations. It has a double-action trigger system, ambidextrous safety, and a reversible magazine catch for left-handed shooters, along with a capacious 13-round magazine. A companion gun, the Model 81, is identical mechanically, but is chambered for the 32 ACP cartridge. Although it has many features, the pistol is not unnecessarily complicated. While there are some small differences, the instructions can also be generally applied to the 380-caliber Model 85 and the 22 Long Rifle Model 87.

Field Strip:

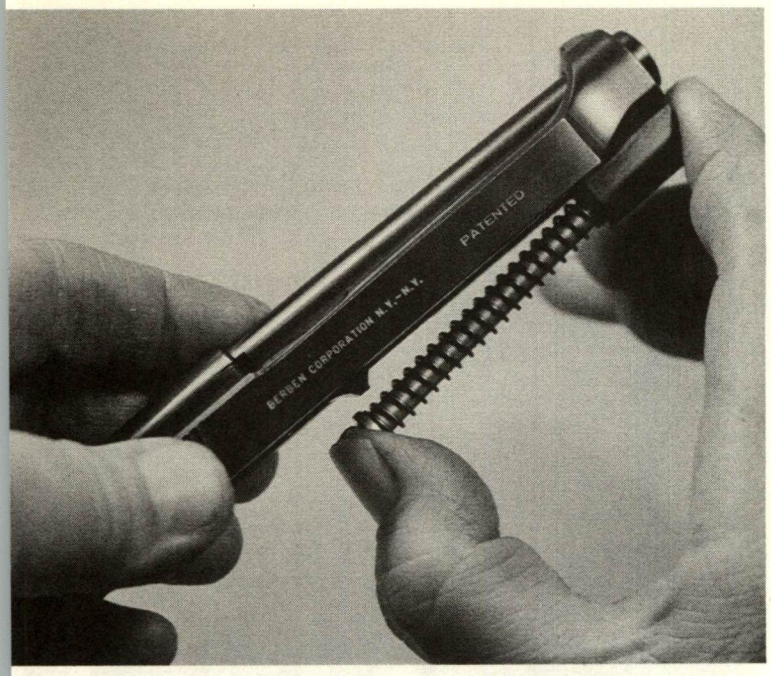
1. The takedown-latch release button is located on the left side of the frame, just forward of the trigger. Remove the magazine, and leave the hammer at rest.



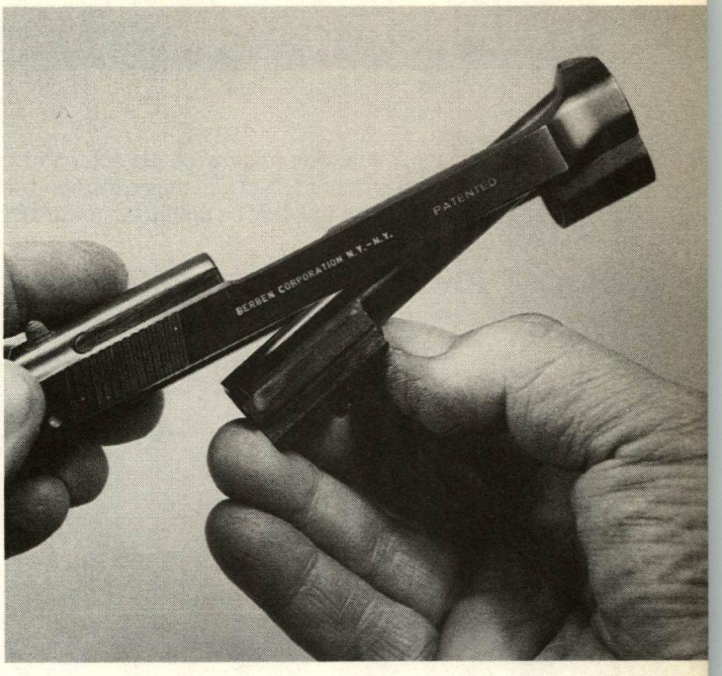
2. The takedown-latch is located on the right side. Push the latch release button and turn the latch down to the position shown.



3. The slide assembly can now be run forward off the frame.



4. Push the recoil spring guide forward, lift it at the rear, and remove the guide and spring from the slide.

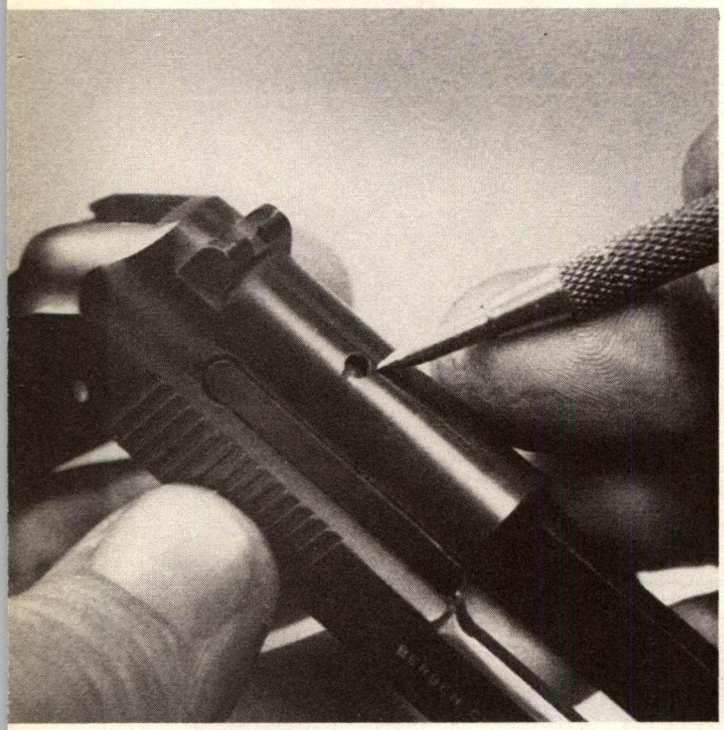


5. Move the barrel slightly forward, and remove it from the bottom of the slide. **Gun is now field-stripped.**

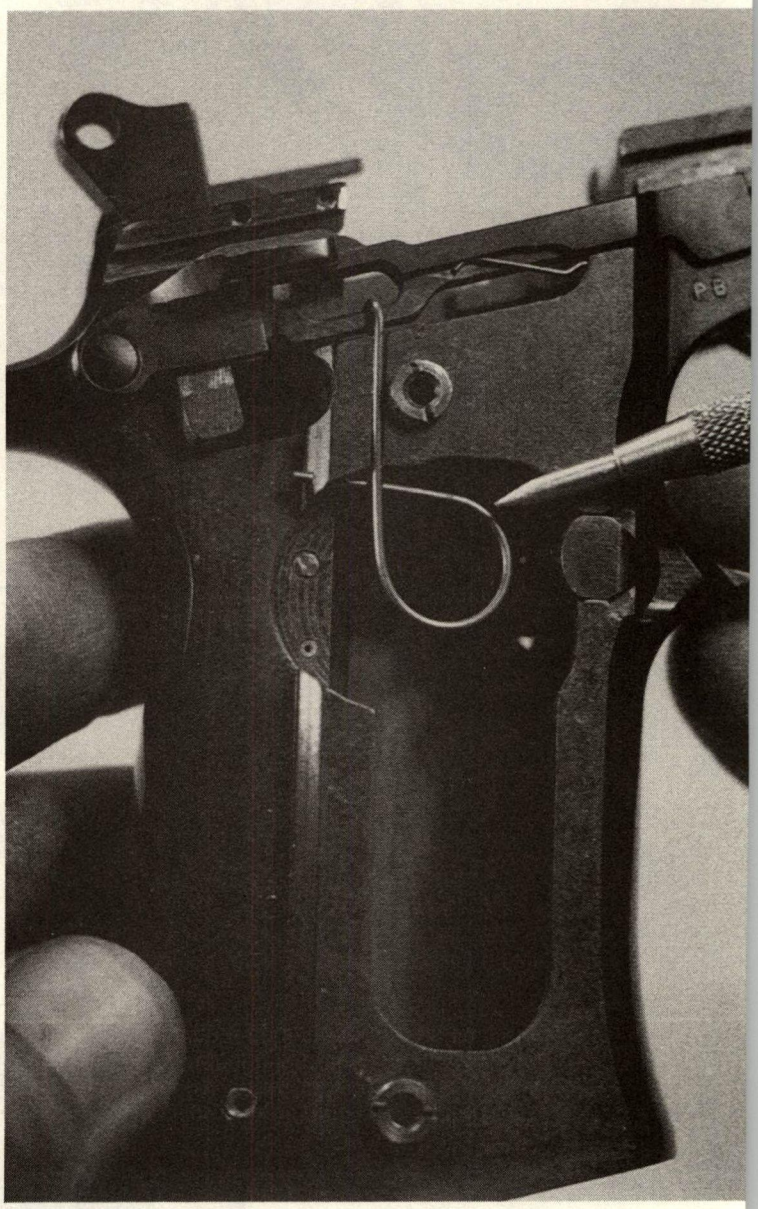
Beretta 84 field-stripped

Detail Strip:

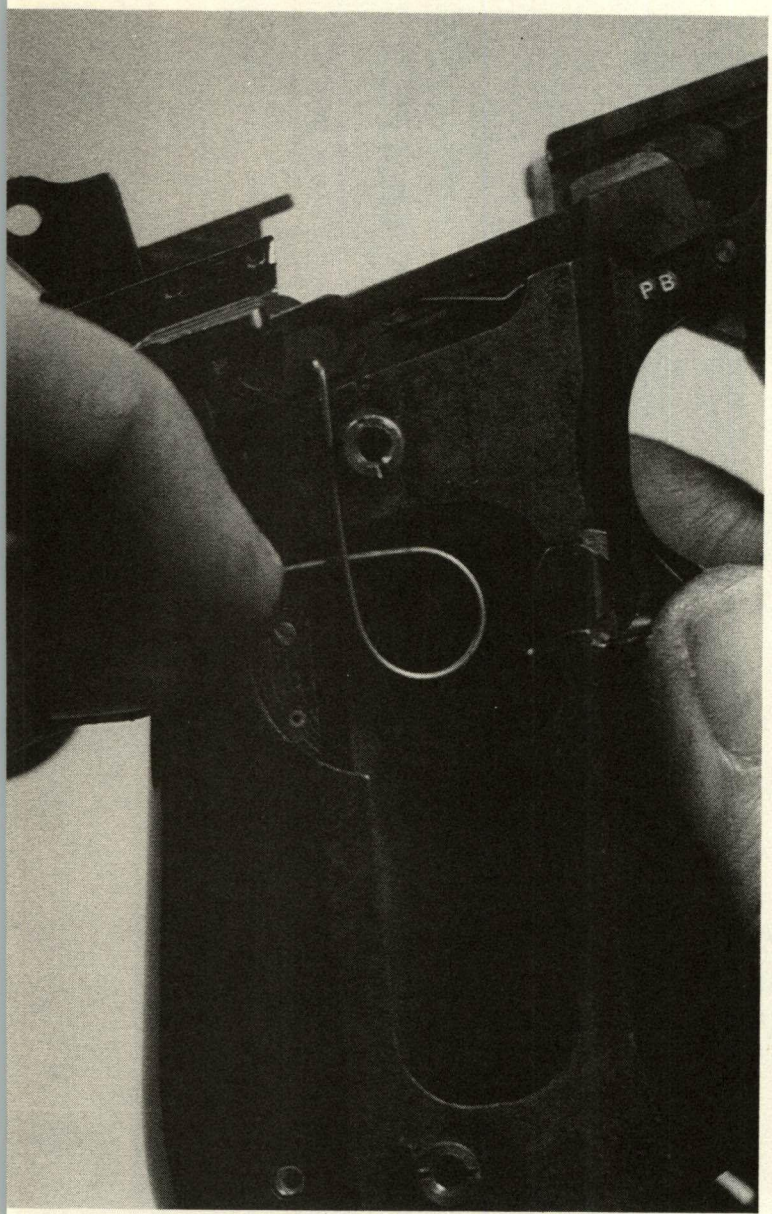
6. A vertical pin in the slide retains the extractor and its spring, and the extractor pivot lug retains the firing pin and its spring. The pin should be drifted out toward the top.



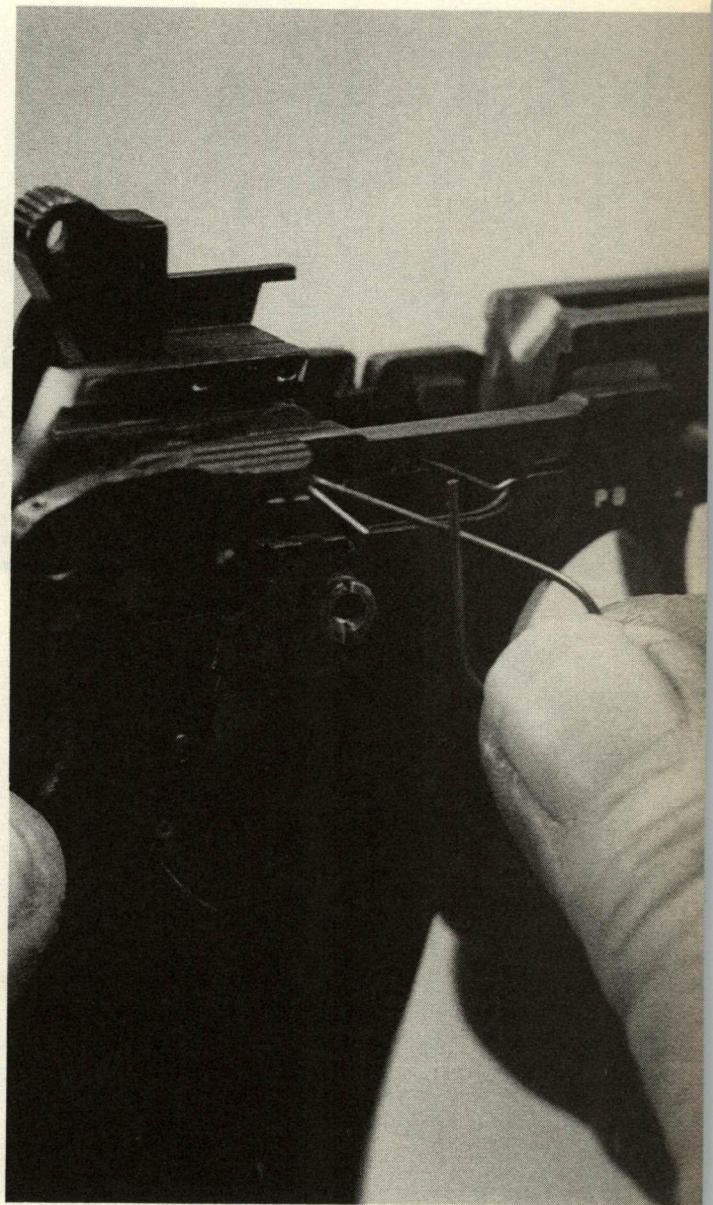
7. The magazine safety is a round-wire torsion spring located on the right side of the frame, hooked into an opening in the trigger bar.



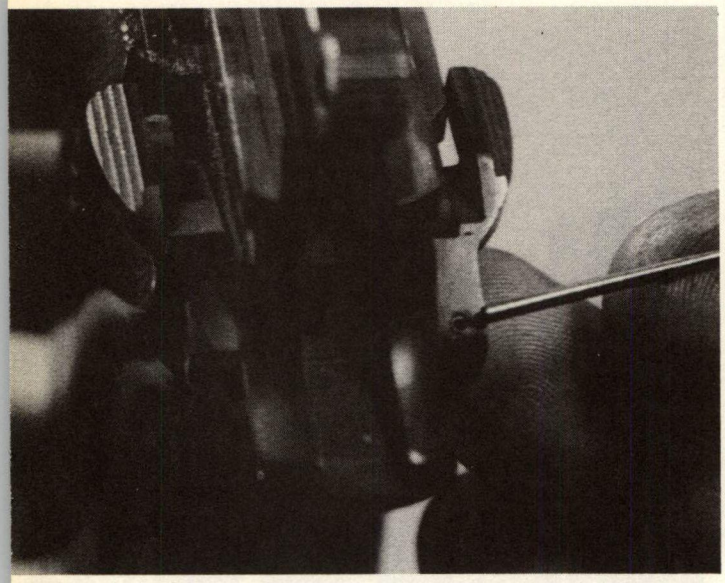
8. To remove the magazine safety spring, flex its lower arm out of its recess in the frame and move the lower loop of the spring outward.



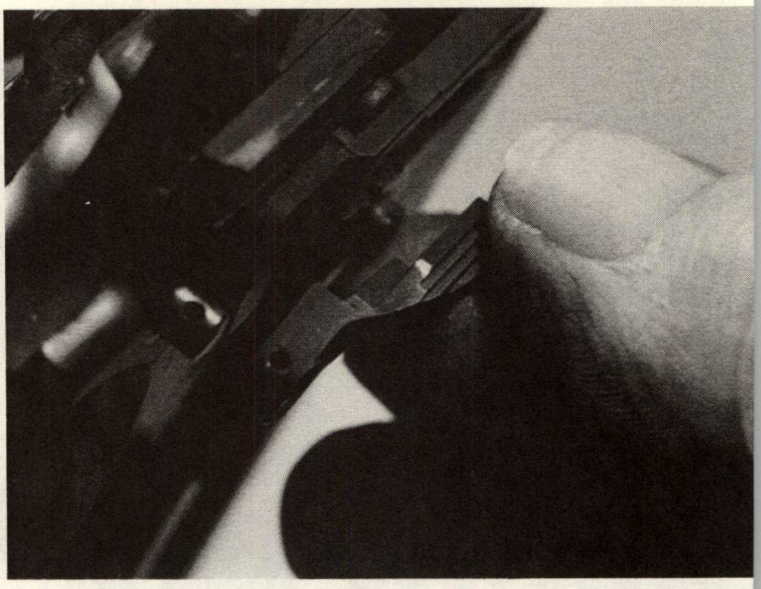
9. Turn the spring to free its upper hook from the opening in the trigger bar, and remove the spring to the right.

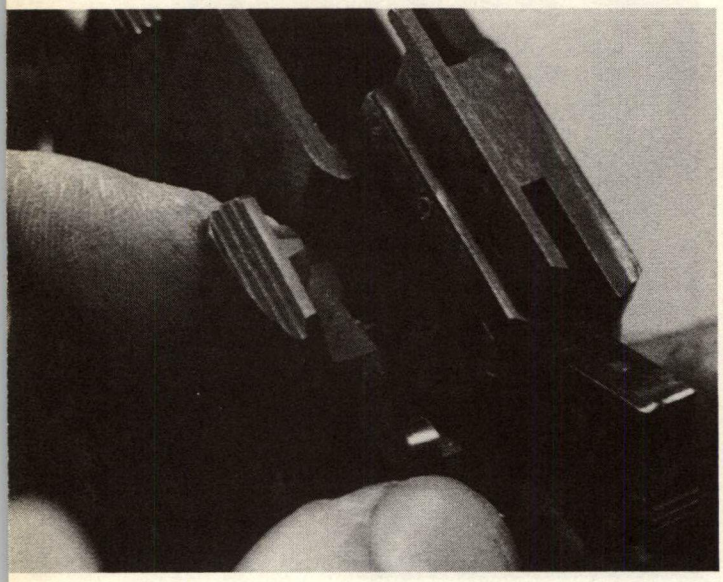


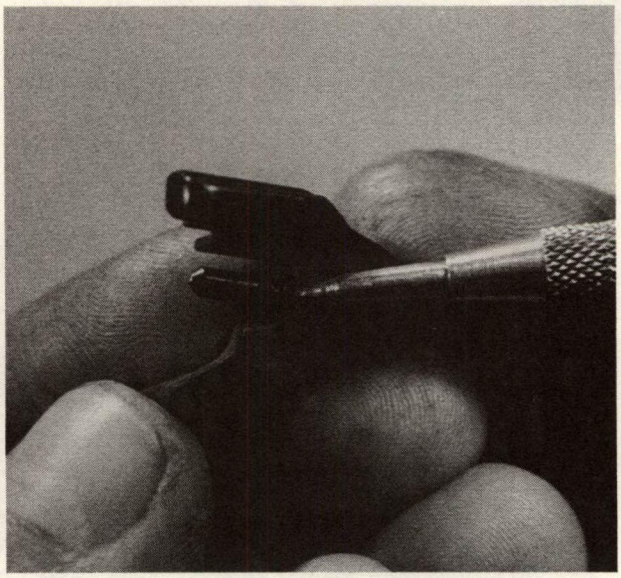
10. The right safety-lever is retained on the cross-shaft of the safety by a vertical roll pin. Use a roll pin punch to remove it.



11. When the pin is driven out, the right safety-lever can be removed toward the right.



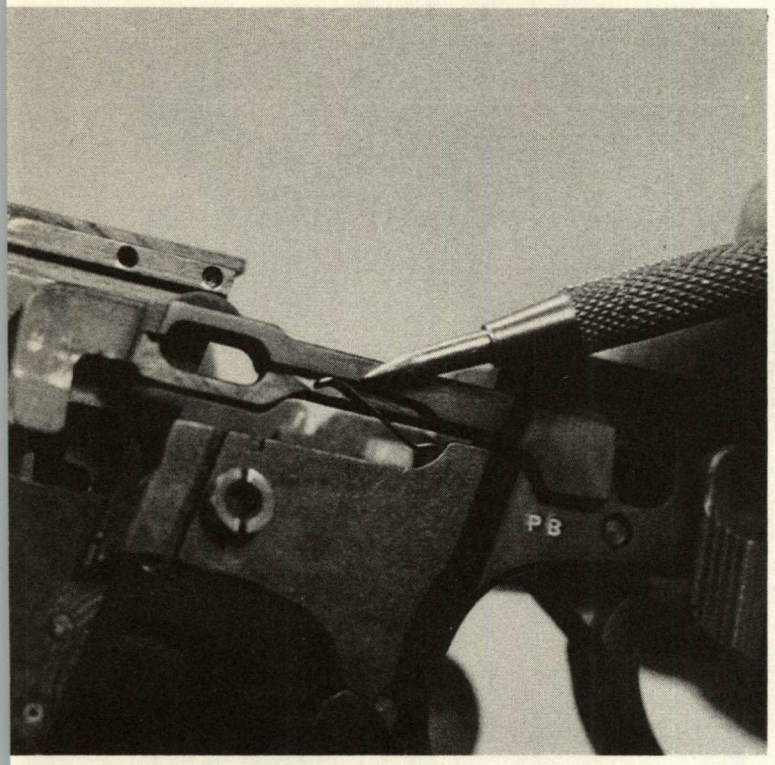


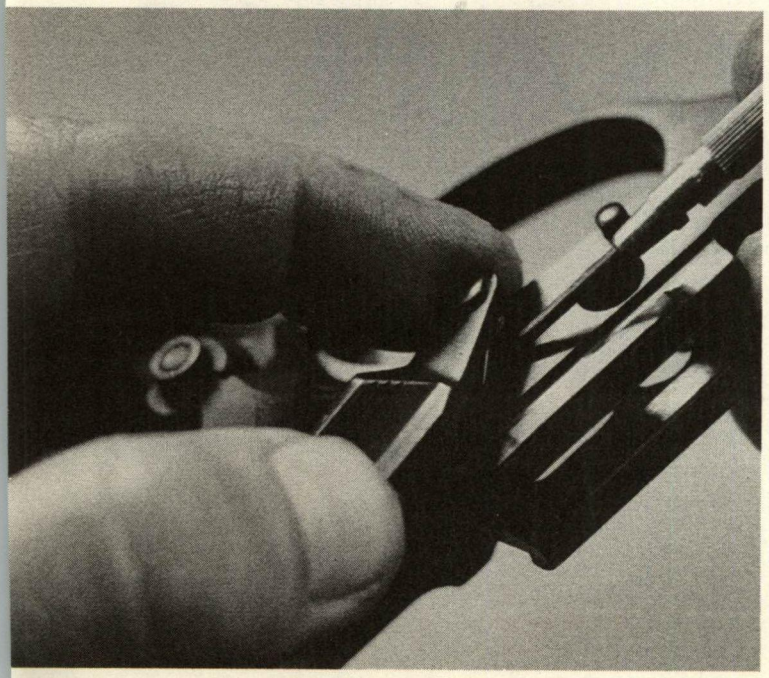


12. With the hammer cocked, remove the left safety-lever and its cross-shaft toward the left. **Caution:** *As soon as the safety clears its spring-post, the internal spring and plunger will be released.* Keep a fingertip in front of the safety, as shown, to prevent their escape.

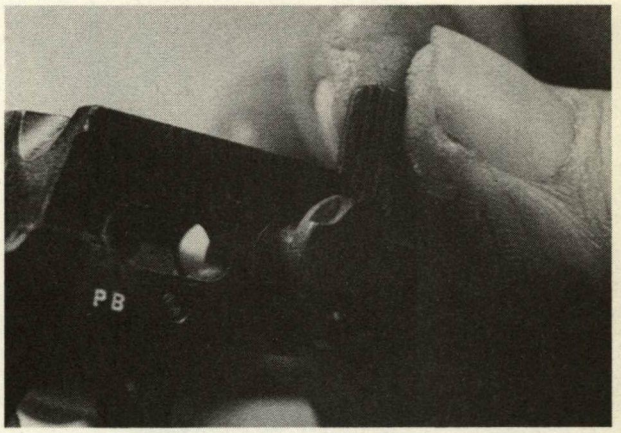
13. The positioning spring and plunger are mounted inside the left safety-lever. Take care that these small parts are not lost.

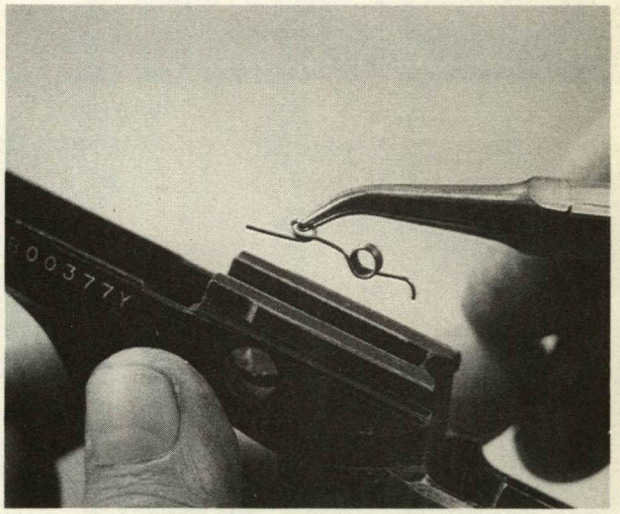
14. Detach the trigger bar spring from its groove in the bar, and lift it from its recess in the frame. Remove the trigger bar toward the right side.





15. Push the takedown-latch release button, turn the release up to the position shown and remove it toward the right.



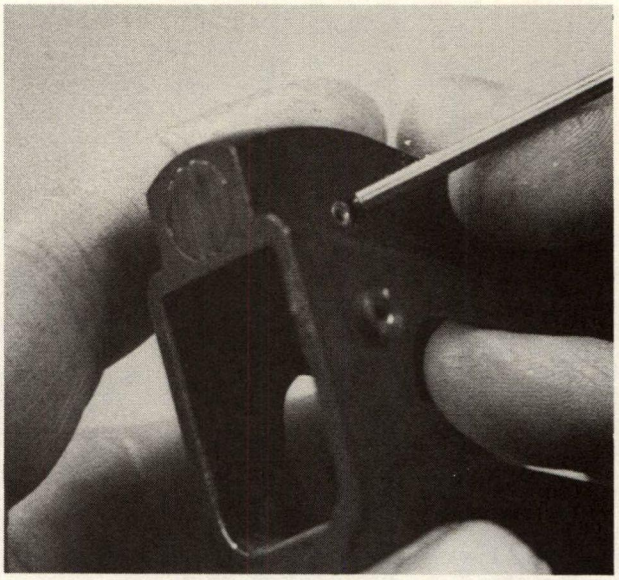


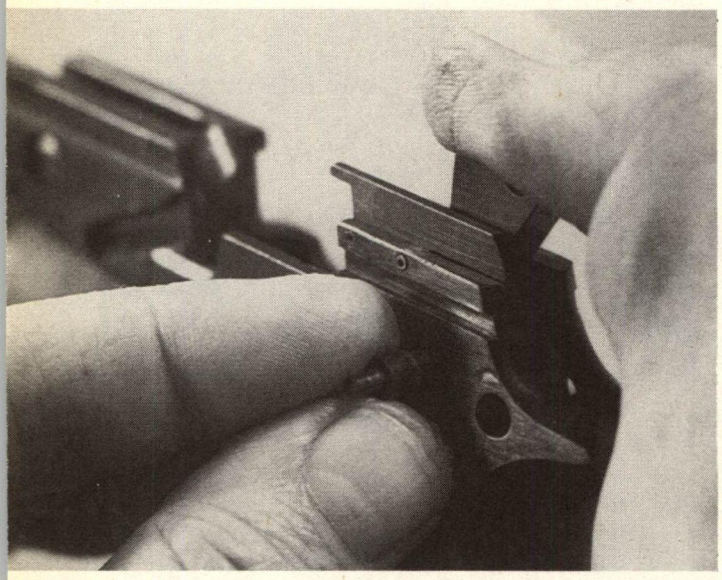
17. The cross-shaft of the slide latch is also the trigger pivot, and the trigger spring can now be removed from the top of the frame. The forward tip of the trigger spring also powers the takedown-latch release button, and the release will now probably fall out of its recess in the gun or can now be removed toward the right.

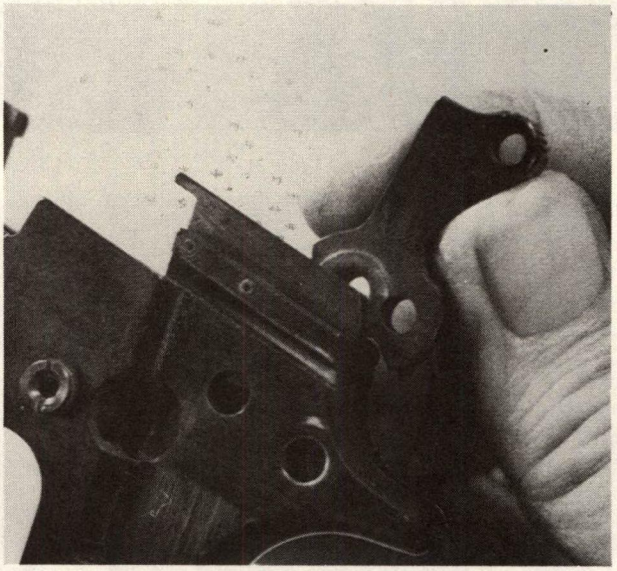
16. Move the slide latch slightly to the left, and use a small screwdriver to disengage its spring from the recess on the frame. When the spring is free, remove the slide latch toward the left side.

18. The trigger can now be removed downward, into the interior of the guard.

19. A roll pin at the lower rear of the grip frame retains the frame plug, which is also the hammer spring base. After the pin is removed, the base can be pushed down and out by cocking the hammer.



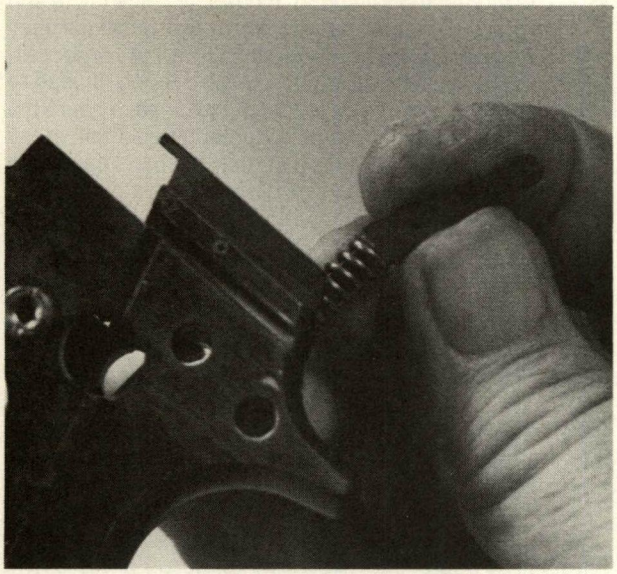




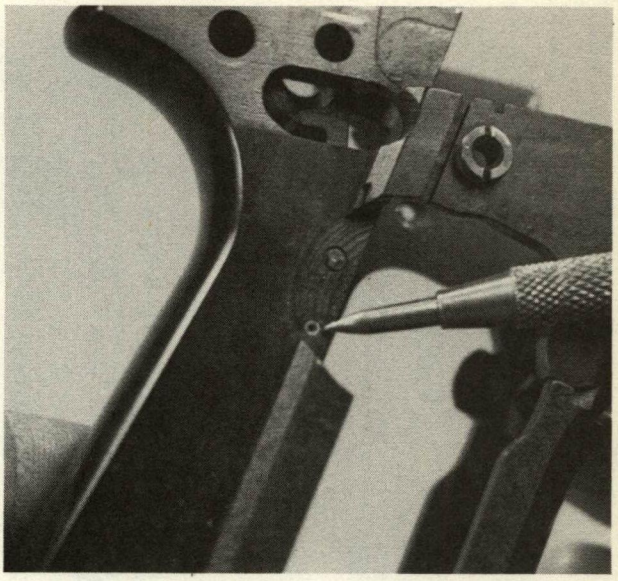
20. Removal of the spring base plug will make hammer removal easier, but is not absolutely necessary. If the plug is still in place, restrain the hammer while removing the hammer pivot, as the spring is under some tension even when the hammer is at rest.

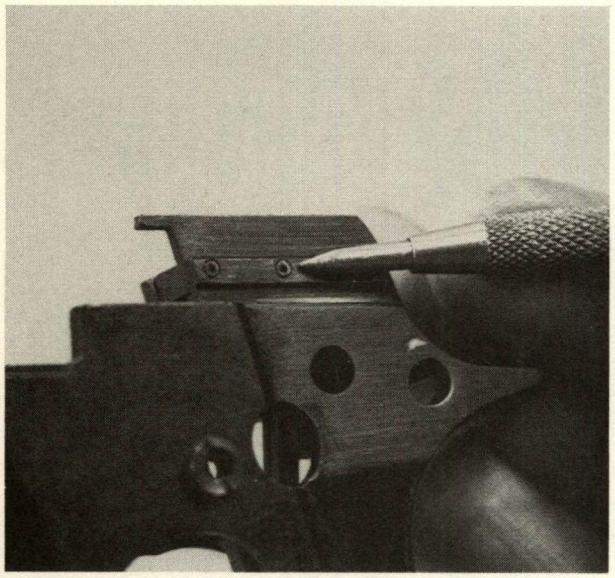
21. Remove the hammer from the top of the frame.

22. Remove the hammer strut and spring from the top of the frame.

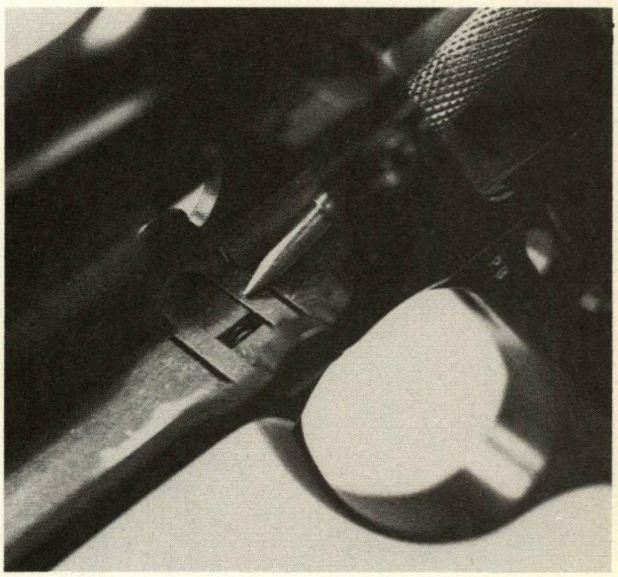


23. The small roll pin at the rear of the magazine well is the compressor for the sear spring and driving it out will release sear spring tension. The larger solid pin above it retains the sear and its spring, and these parts are removed forward, into the magazine well.



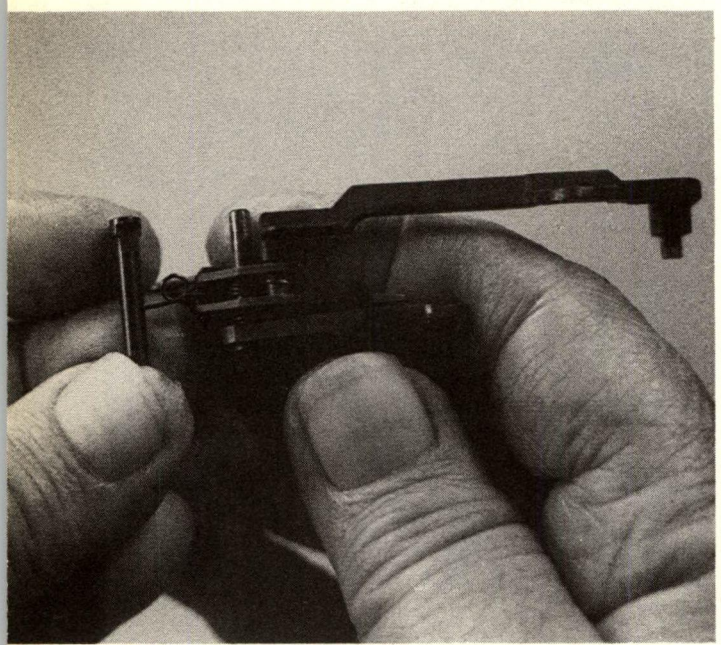


24. The two small roll pins at the top of the frame retain the ejector and its base, removable from the top of the frame.



25. To remove the magazine catch, use a small screwdriver to pry the longer of its two internal blocks, the one on the left, toward the right while pushing on the right end of the magazine catch. When the right end of the catch will clear the internal shoulders of the frame, swing it back into the magazine well and remove it.

Reassembly Tips:



1. The trigger, trigger spring, trigger bar, slide latch, and takedown release are shown in the positions they occupy in the frame. When installing the trigger bar, be sure the rear arm of the trigger spring is lifted to bear on the internal pivot of the bar. Also, be sure the forward tip of the trigger spring enters its hole in the takedown release. Unfortunately, the parts cannot be pre-assembled as shown. They must be put into the frame separately.

When replacing the left safety-lever on the frame, use a small screwdriver to depress the spring and plunger until they can bear on the post. Take care that they don't escape.

When replacing the magazine catch, put the left end back into the recess, with the inner shoulder of the left spring block bearing on its recess in the frame. Push the catch toward the left, compressing the spring, and swing the right end of the catch into the recess. To install the catch for left-handed operation, reverse the direction of the catch, and install it from the opposite side.

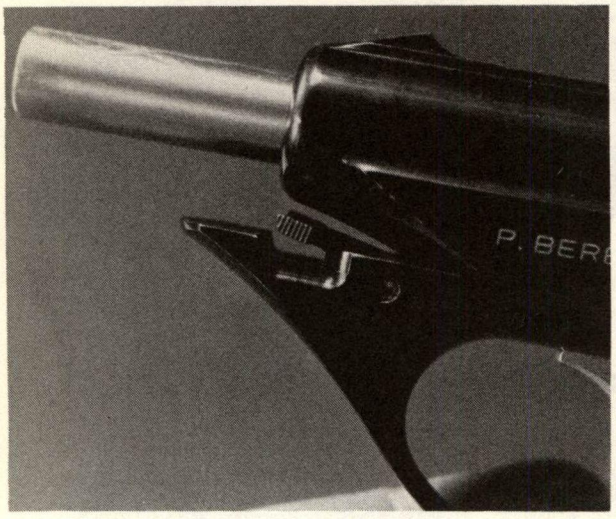
Beretta 90

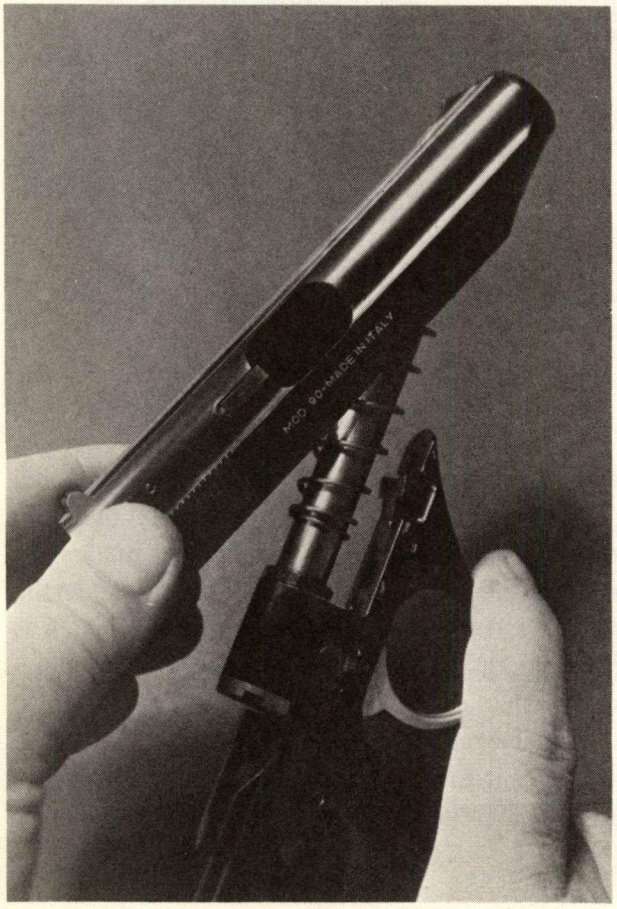
Data:	Beretta Model 90
Origin:	Italy
Manufacturer:	Armi Beretta S.p.A., Rome
Cartridge:	7.65mm Browning (32 ACP)
Magazine capacity:	8 rounds
Overall length:	$6^{3}/_{4}$ inches
Height:	$4^{7}/_{16}$ inches
Barrel length:	$3^{11}/_{16}$inches
Weight:	$19^{1}/_{2}$ ounces

The first double-action pistol made by Beretta, the Model 90 was produced at a new facility in Rome, not at the main factory in Gardone. In regular production it was made only in the 32 ACP chambering, a fact which limited sales in the United States. It fared better in Europe, where 32 ACP is considered an adequate caliber for police and personal defense use. Mechanically, the Model 90 is a total departure from traditional Beretta design. The internal mechanism is closer to the Walther/Sauer pattern but has notable Beretta differences.

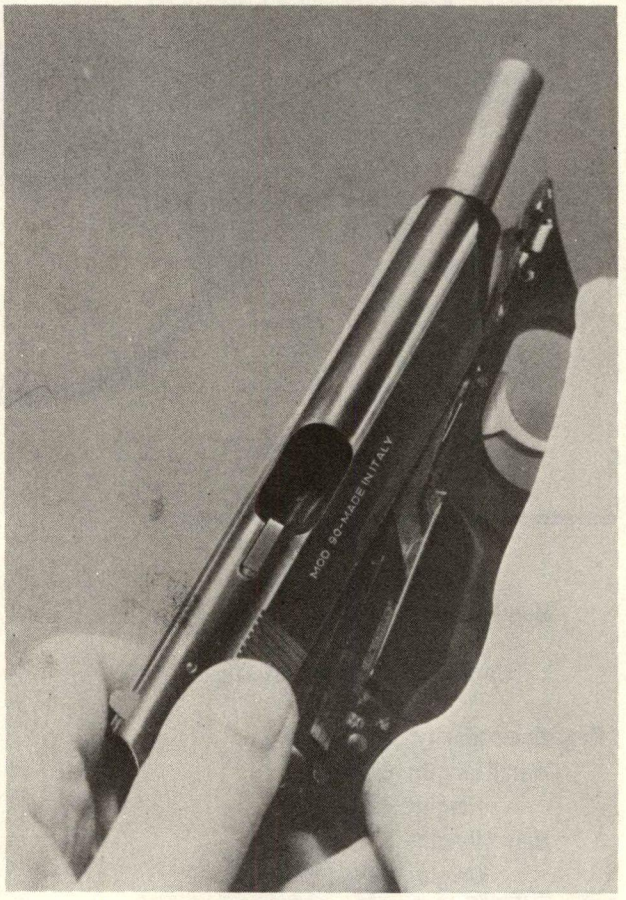
Field Strip:

1. With the empty magazine in place to operate the slide hold-open catch, lock the slide open, then remove magazine. The takedown-latch is located at the front of the frame, just below the end of the locked-open slide. Pull the serrated ears of the takedown-latch forward and tilt it up toward the slide. It will stay in that position.

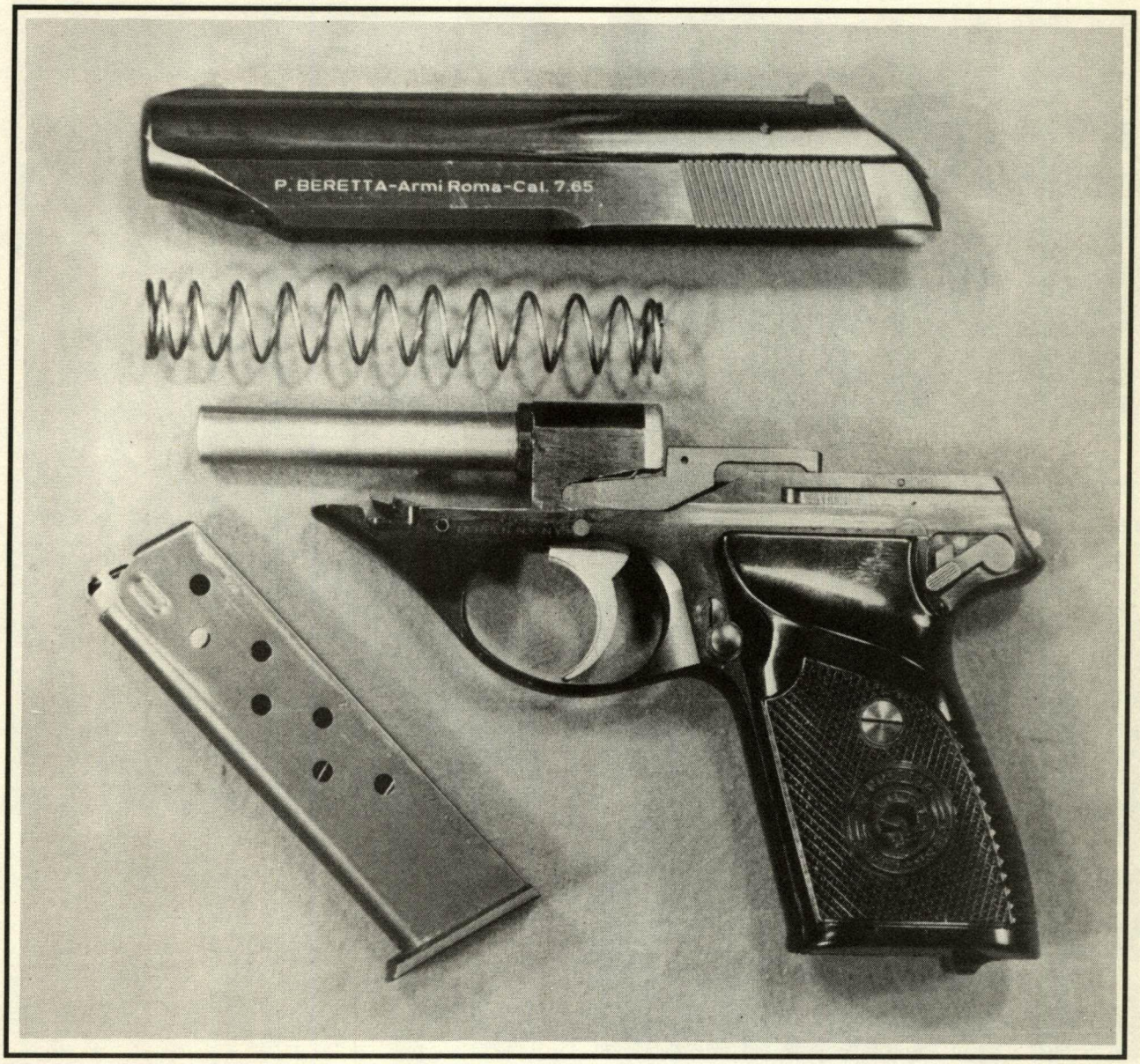




2. Draw the slide back as far as it will go, and lift it clear of the frame at the rear.



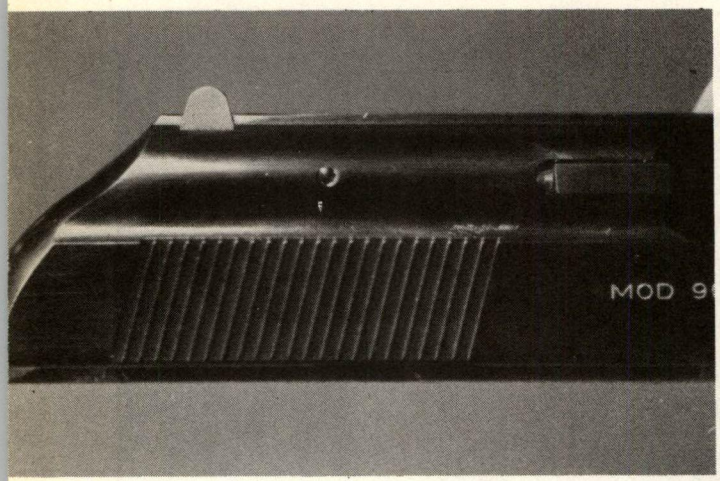
3. With the slide lifted at the rear to clear the barrel housing, run it forward off the barrel and frame. The recoil spring can now be removed from the barrel. **Gun is now field-stripped.**

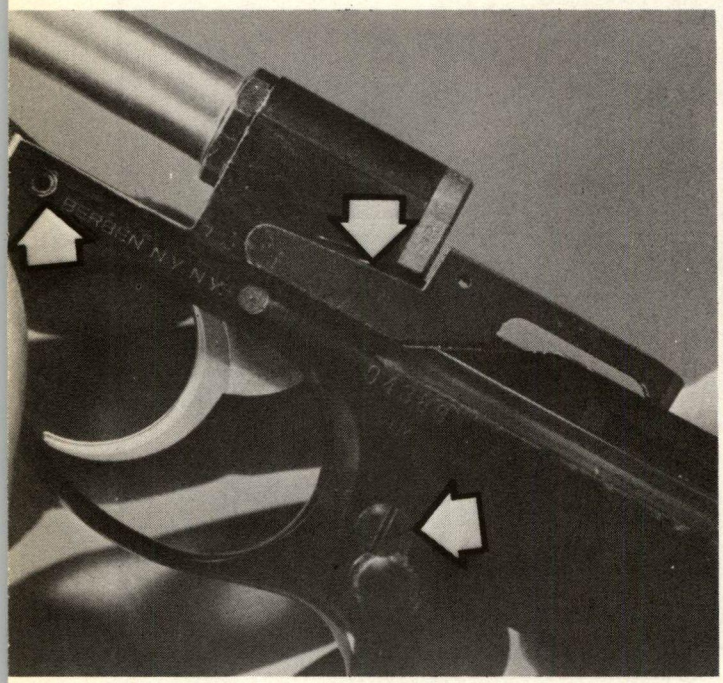


Beretta 90 field-stripped

Detail Strip:

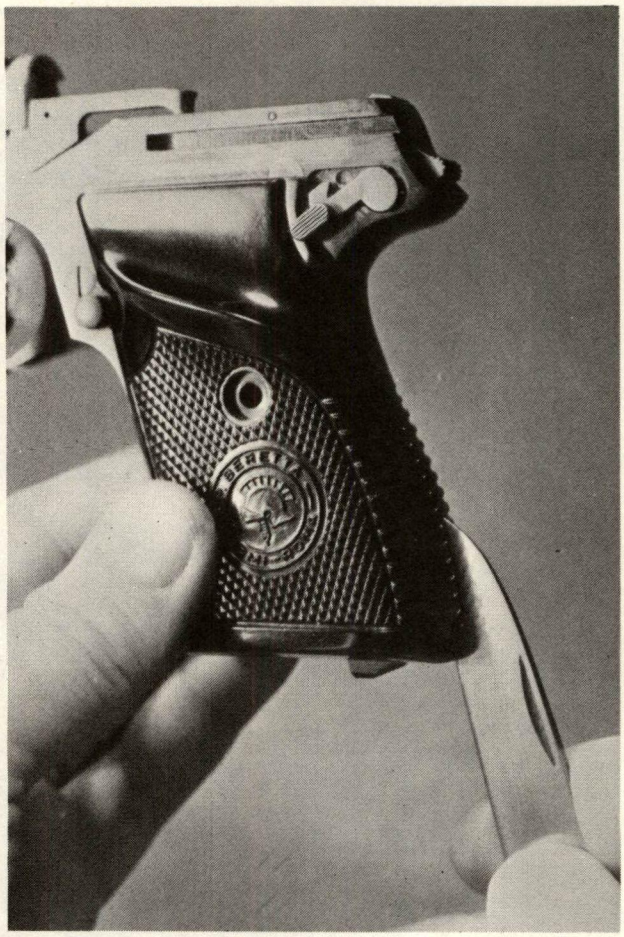
4. A single cross-pin holds the firing pin and its spring in the slide, and this should be driven out from left to right. The extractor can be removed by depressing its spring and follower with a small screwdriver, and tipping the extractor out toward the front.





6. A rolled steel cross-pin retains the takedown-latch and its spring (left arrow). The ejector/hold-open is removed by prying the round-wire spring (center arrow) out of its shelf, and lifting the part off toward the left. The magazine release system is held by a screw on the left side (right arrow) beside the release button.

5. The grips are wrap-around type, seamed at the rear, and are usually tightly fitted. Also, there is a bracing pin of rolled steel at the lower rear edge. After taking out the screws, pry the grips apart carefully with the edge of a knife, and remove the right grip first. When taking off the left grip, set the safety to the on-safe position, and after lifting the lower edge of the grip, move the grip downward and off.



7. The barrel is retained in the frame by a hexagonal nut (arrow) which surrounds it, but removal requires a metric wrench of the proper size. The trigger cross-pin is drifted out from right to left, as are the sear and hammer pivot pins. When the hammer is cocked, the tip of the hammer strut appears in a hole at the lower rear of the grip frame (arrow), and the strut has a hole for insertion of small drift or paper clip, to trap the hammer spring. After inserting a tool in the strut, pull the trigger, ease the hammer down, then remove it. **Caution:** *When releasing the trapped mainspring, insert a tool from the top of the frame to bear on the hammer strut, then release the strut and ease it out.* The trigger bar/disconnector is released in much the same manner as the ejector/hold-open, by gently prying its spring from the slot in its underside, and lifting it off toward the right. The very small cross-pin at the top of the frame holds no part—it is a hammer stop. The safety-lever can be removed in either the on-safe or off-safe position by simply pushing it out toward the left, but proceed with caution, as the tiny plunger and spring below will be released from the frame. When taking off the safety, cover the entire rear of the gun with a shop cloth to catch these small parts.

Reassembly Tips:

Note that one end of the recoil spring is larger in diameter; the large end goes toward the front of the slide.

When replacing the hammer strut and spring, the strut is accessible through an opening in the backstrap of the grip frame, and can be gripped with pliers and pushed down for insertion of a keeper pin while the hammer is installed.

When the slide is run forward during reassembly, it will automatically push the takedown-latch back into locked position.

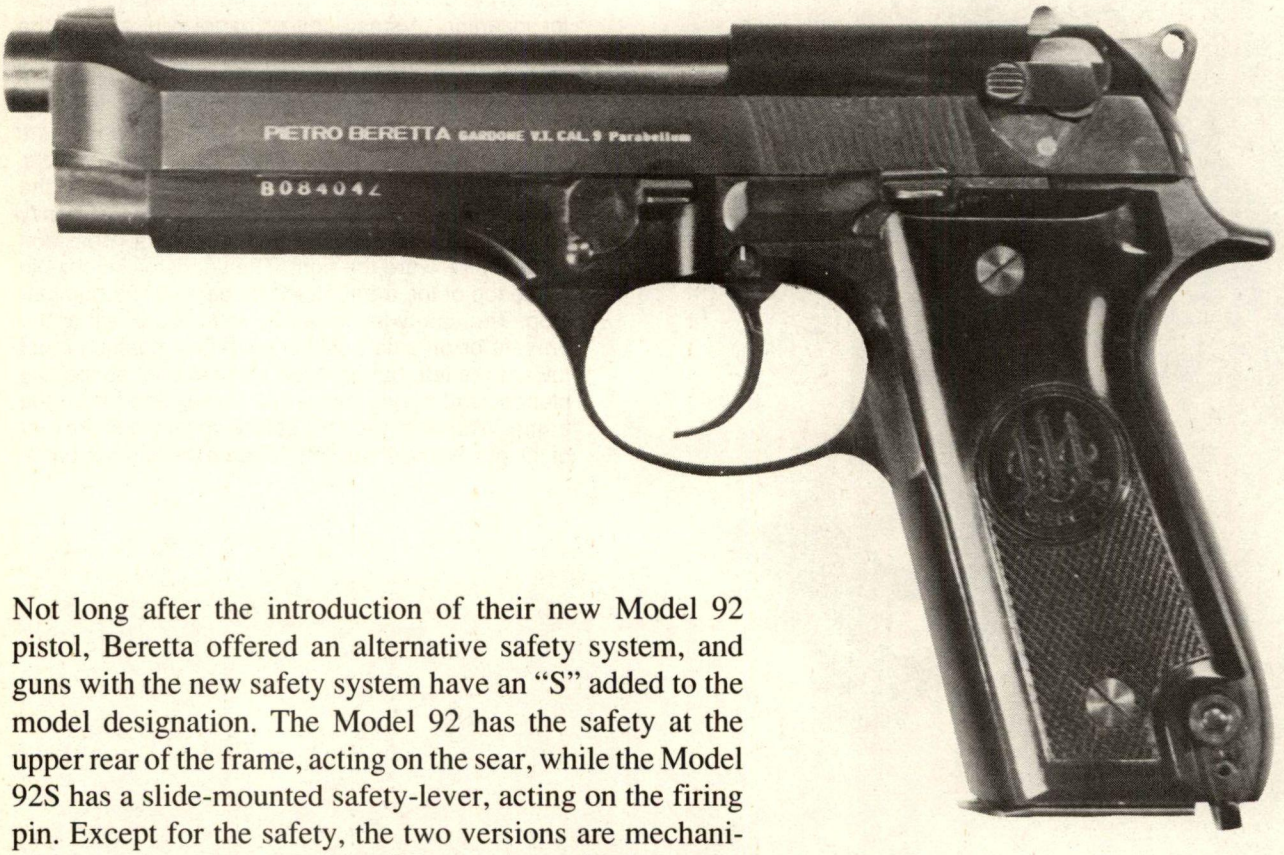
The safety-lever shaft has a bevel to aid reassembly, but the plunger must be partially depressed before it can meet the bevel. This can be done by inserting a small screwdriver through the shaft hole on the right side of the frame. Wear eye protection, and be careful the screwdriver doesn't slip, or you may spend a long time looking for that tiny plunger.

Beretta 92S

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Beretta Model 92S also apply to the following guns.

Beretta Model 92
Beretta Model 92F
Taurus Model PT99
Beretta Model 92SB
Taurus Model PT92
Taurus Model PT99AF
Beretta Model 92SBC
Taurus Model PT92AF



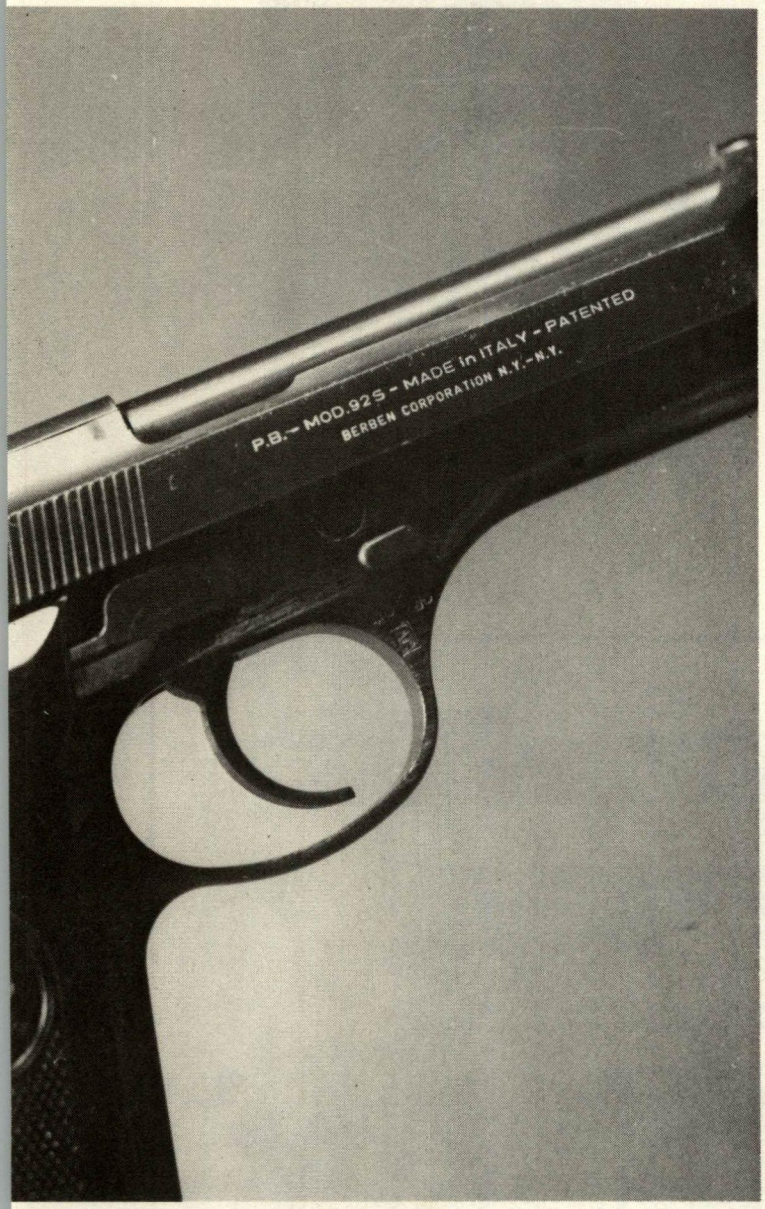
Not long after the introduction of their new Model 92 pistol, Beretta offered an alternative safety system, and guns with the new safety system have an "S" added to the model designation. The Model 92 has the safety at the upper rear of the frame, acting on the sear, while the Model 92S has a slide-mounted safety-lever, acting on the firing pin. Except for the safety, the two versions are mechanically the same and the instructions can be applied to either one.

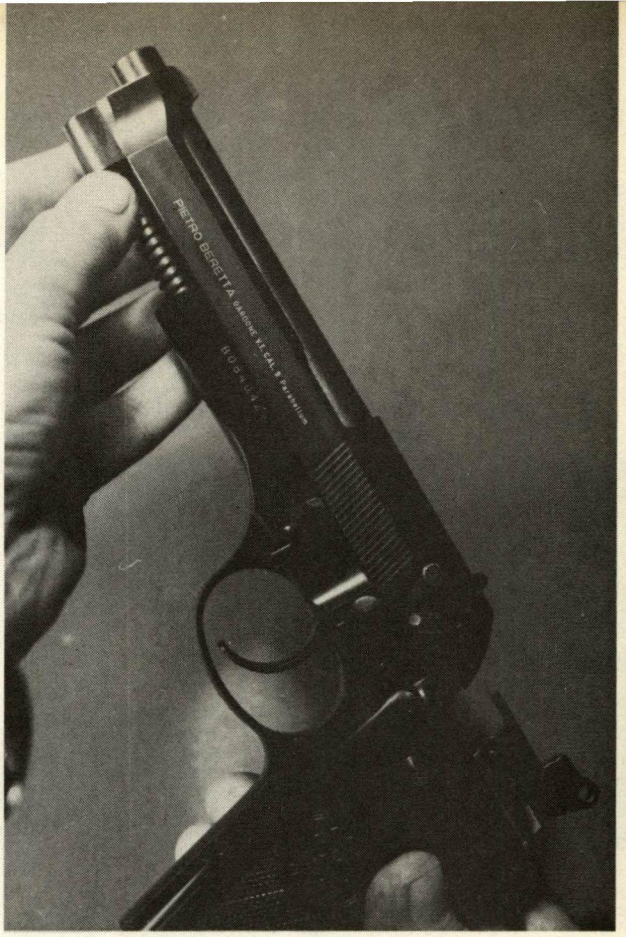
The new U.S. military pistol, commercially called the Model 92F, has the magazine release button at the rear terminus of the trigger guard. The instructions for that part are the same as shown in the sequence on the Beretta 380-caliber Model 84. The Taurus PT92 and PT99 are essentially the same as the original Beretta Model 92. A separate series of instructions has been added to cover the frame-mounted sear-block safety on those guns.

Data:	Beretta Model 92S
Origin:	Italy
Manufacturer:	Armi Beretta, SpA, Gardone (Brescia)
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	15 rounds
Overall length:	$8\frac{1}{2}$ inches
Height:	$5\frac{3}{8}$ inches
Barrel length:	5 inches
Weight:	34 ounces

Field Strip:

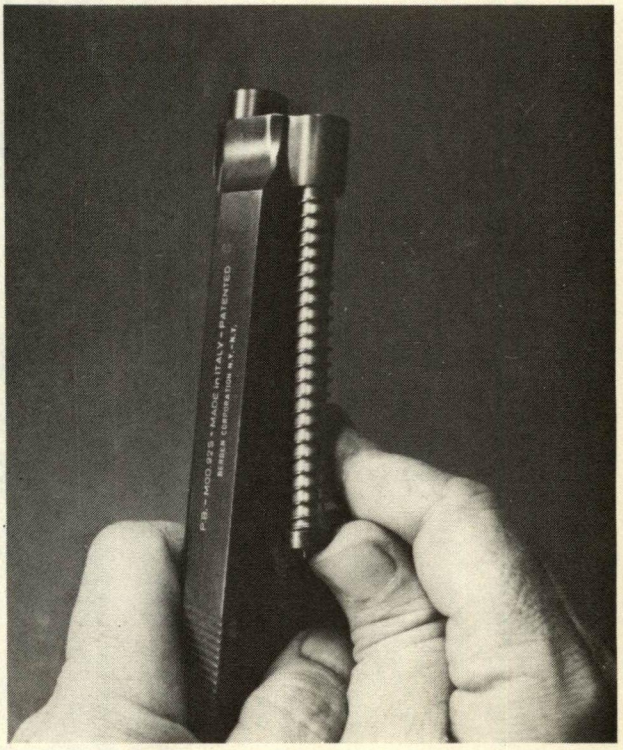
1. The takedown-lever release button is located on the right side of the frame, just above the front leg of the trigger guard. With the magazine removed, push the release button and turn the takedown-lever down.



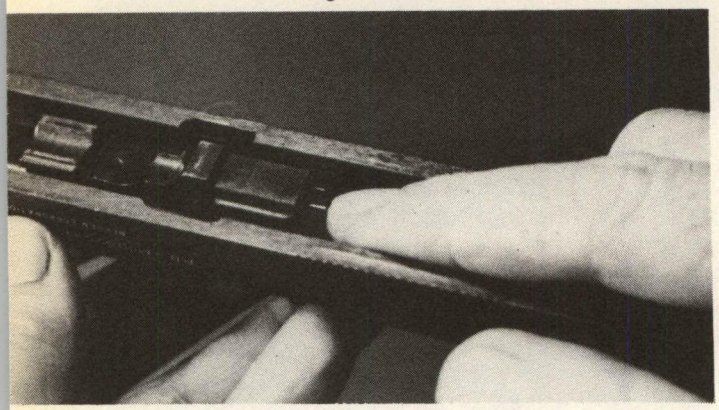


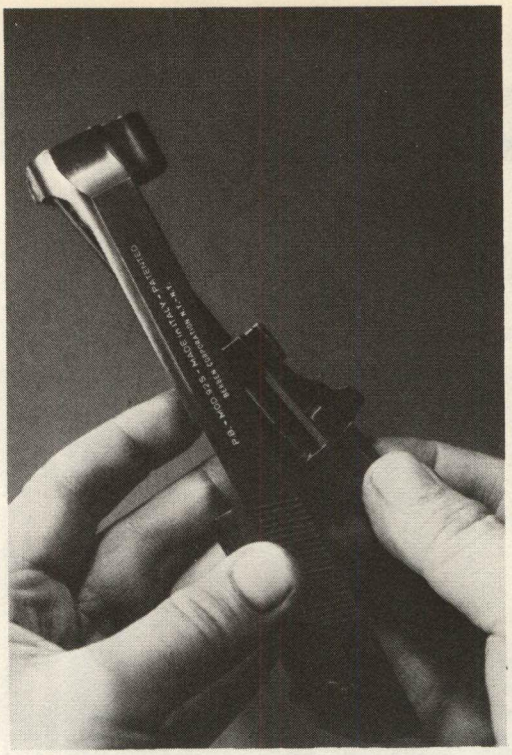
2. Run the slide assembly forward off the frame.

3. Lift the rear of the recoil spring guide from its step on the locking block and remove the spring and guide toward the rear.



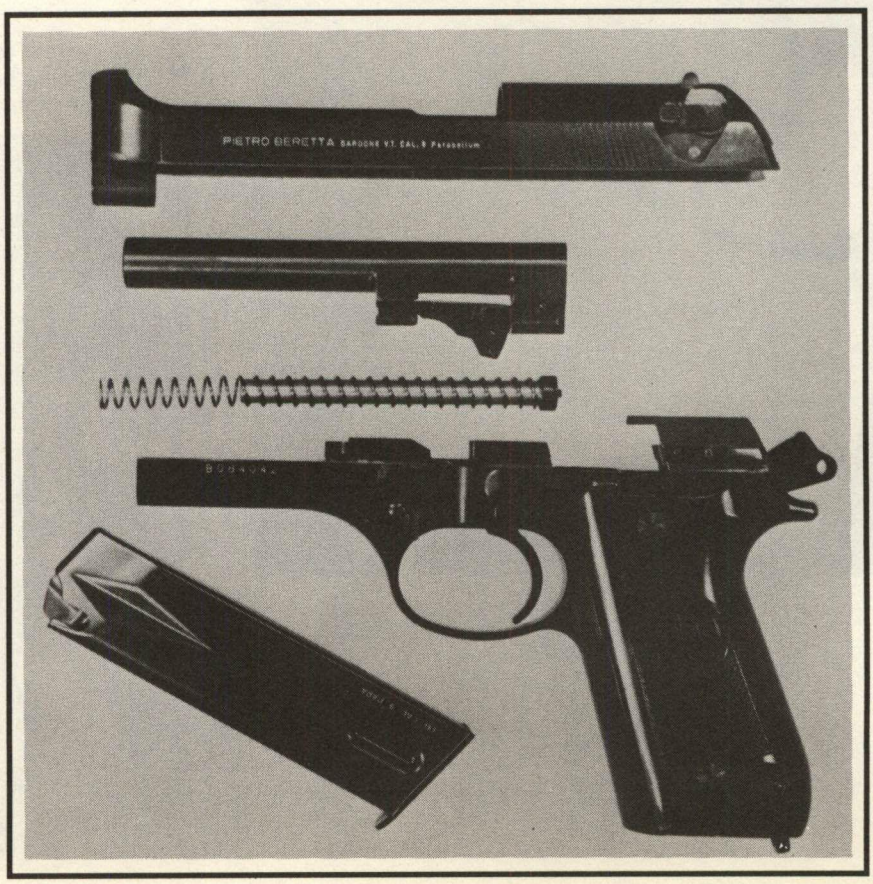
4. Push the button at the rear of the barrel underlug to move the locking block from its recesses in the slide.





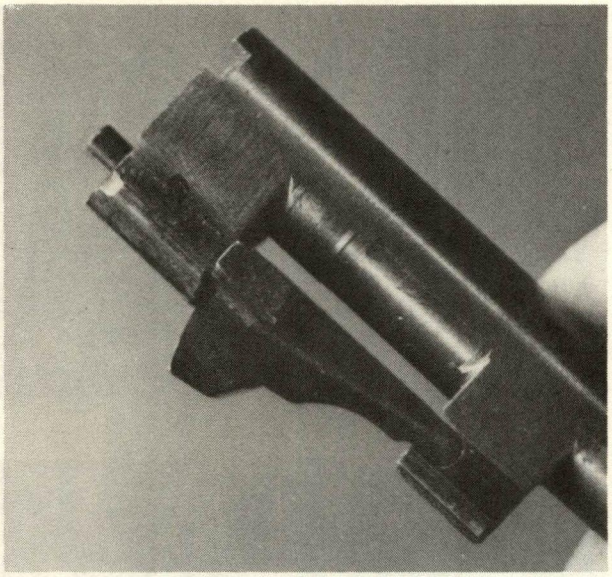
5. Move the barrel slightly forward to clear the extractor and remove the barrel from the slide, down and toward the rear. **Gun is now field-stripped.**

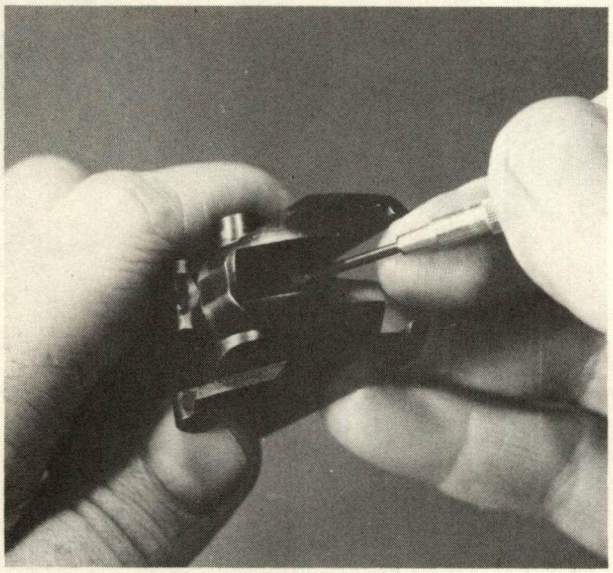
Beretta 92S field-stripped



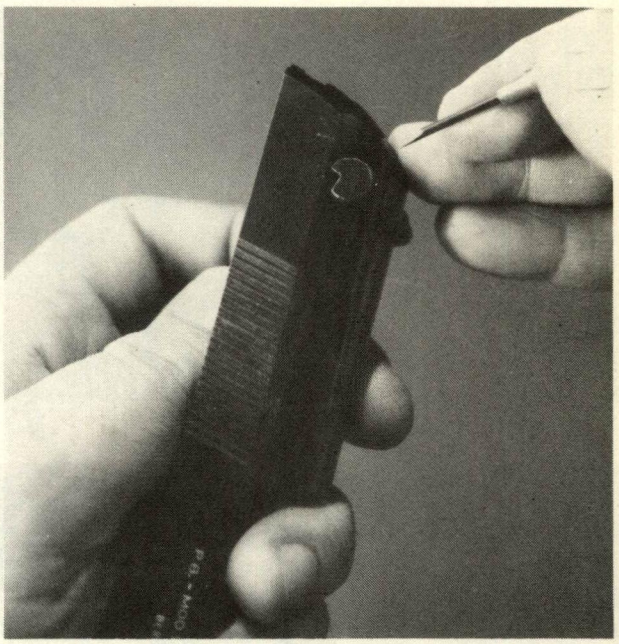
Detail Strip:

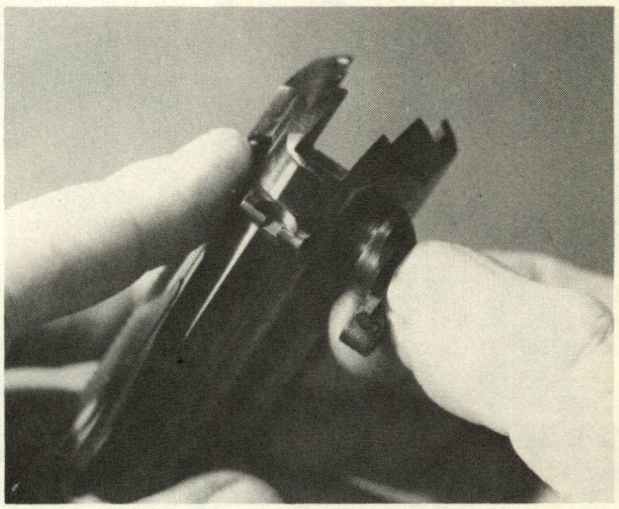
6. Drifting out the roll pin in the rear underlug of the barrel will release the locking block plunger for removal toward the rear. The locking block can then be moved out toward either side.





7. Use a small screwdriver to depress the small locking plunger at the right end of the safety-shaft. Move the safety-lever upward, slightly beyond its normal off-safe position, to trap the locking pin in the depressed position.

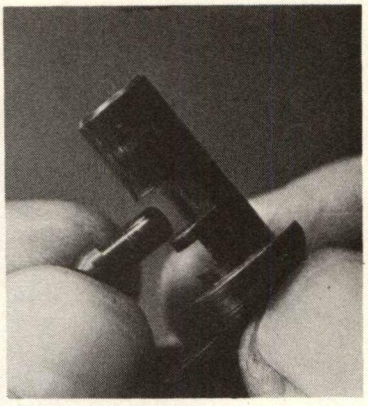




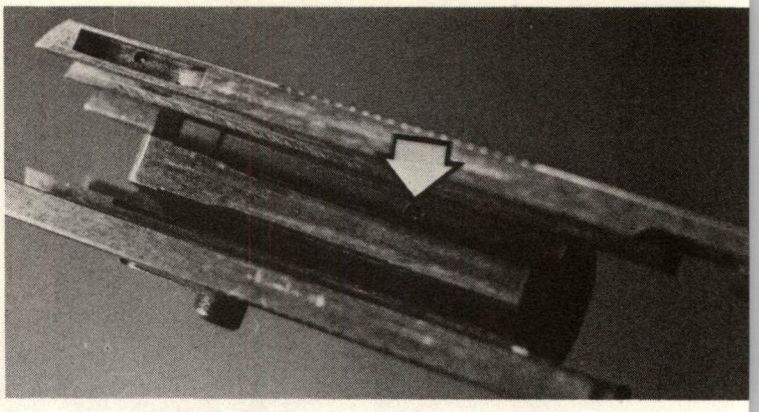
8. Use a small tool to depress the head of the firing pin impeller, and turn the safety-lever a little farther upward, then push the safety out toward the left. **Caution:** *The small lock pin on the right side will be released as the safety clears it.* Restrain the pin and its spring, and remove them upward from their recess in the slide.

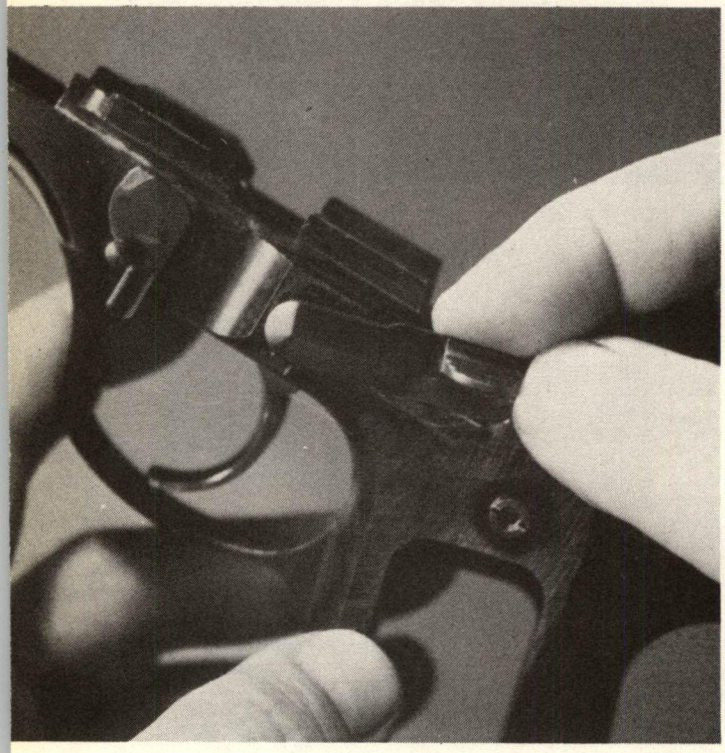
9. Remove the safety toward the left side of the slide.

10. The firing pin impeller is held in the safety only when the safety is in the slide. Take care that it doesn't fall out and become lost.

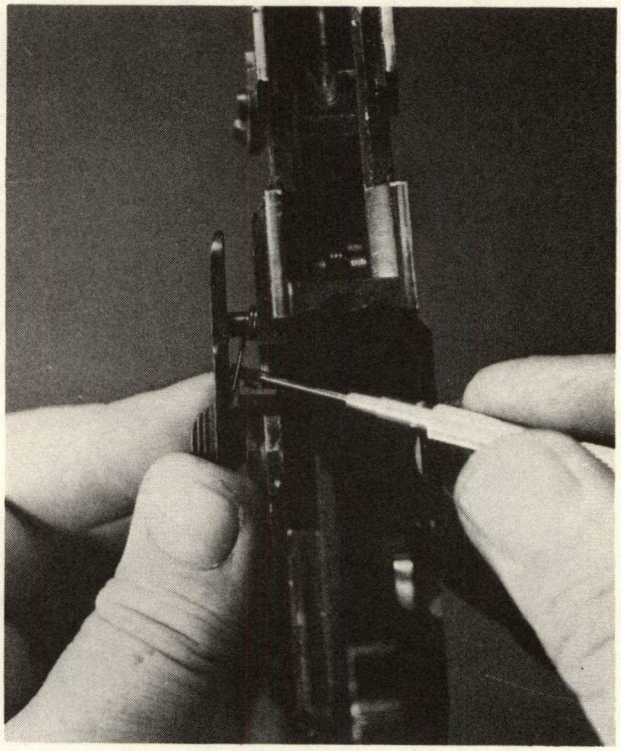


11. The firing pin, extractor and their springs are retained in the slide by a single slanted pin (arrow) which must be driven out toward the top of the slide. Remove the extractor and its spring from their recess on the right side, and the firing pin and spring toward the rear. **Caution:** *The firing pin spring is under compression, so take care to restrain the firing pin and ease it out.*



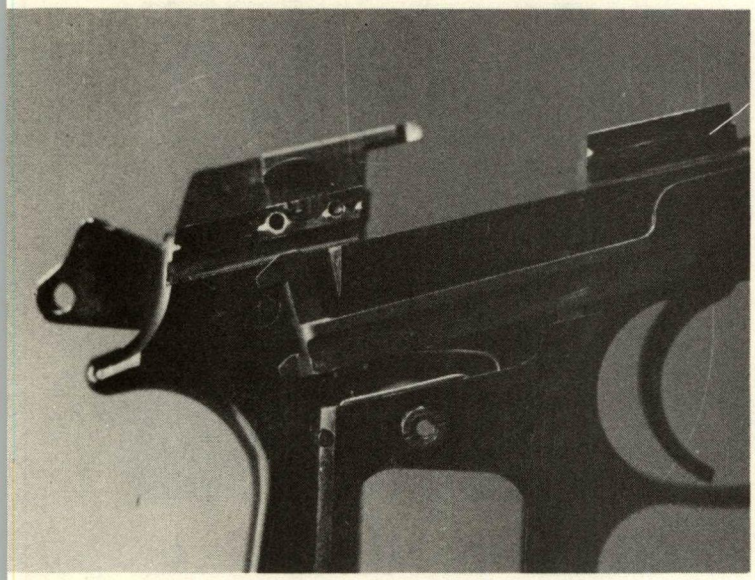


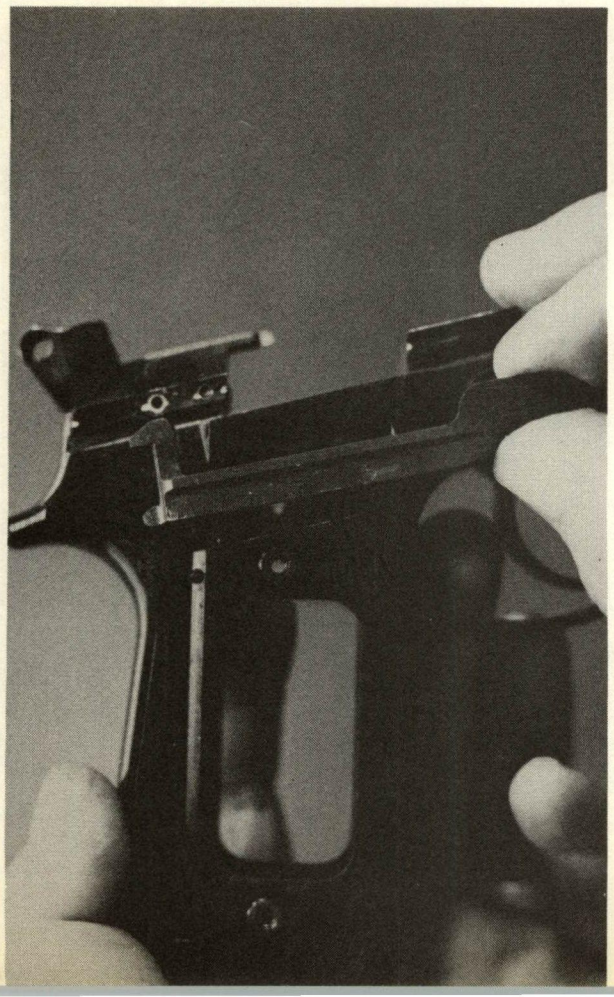
12. Lift the slide latch to clear the frame at the rear, and move it toward the left.



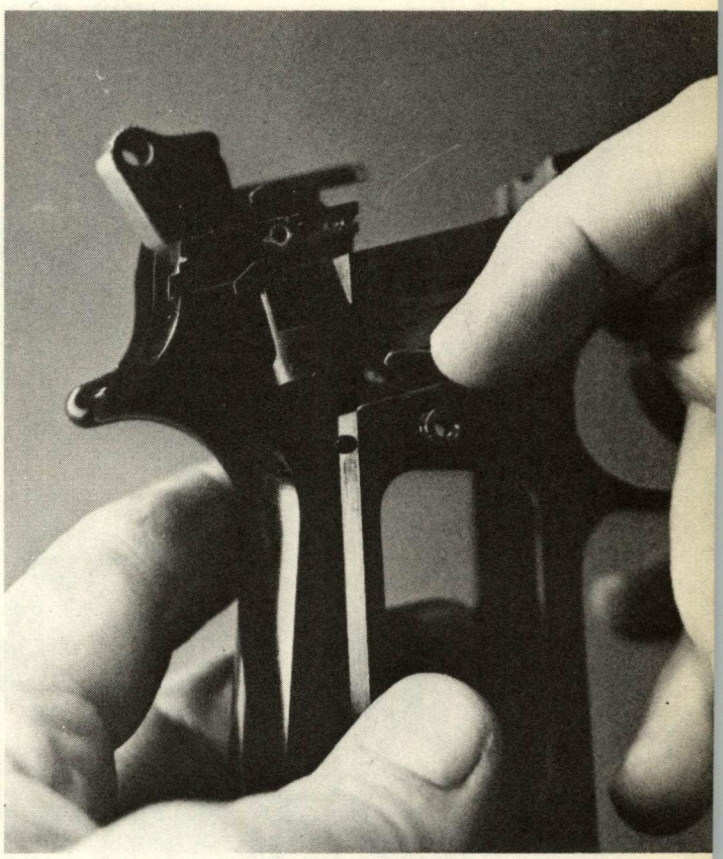
13. After the slide latch is moved slightly outward, use a small tool to lift the rear arm of the latch spring from its recess in the latch and remove the latch toward the left side.

14. The trigger bar and its spring are shown in assembled position on the right side of the frame.



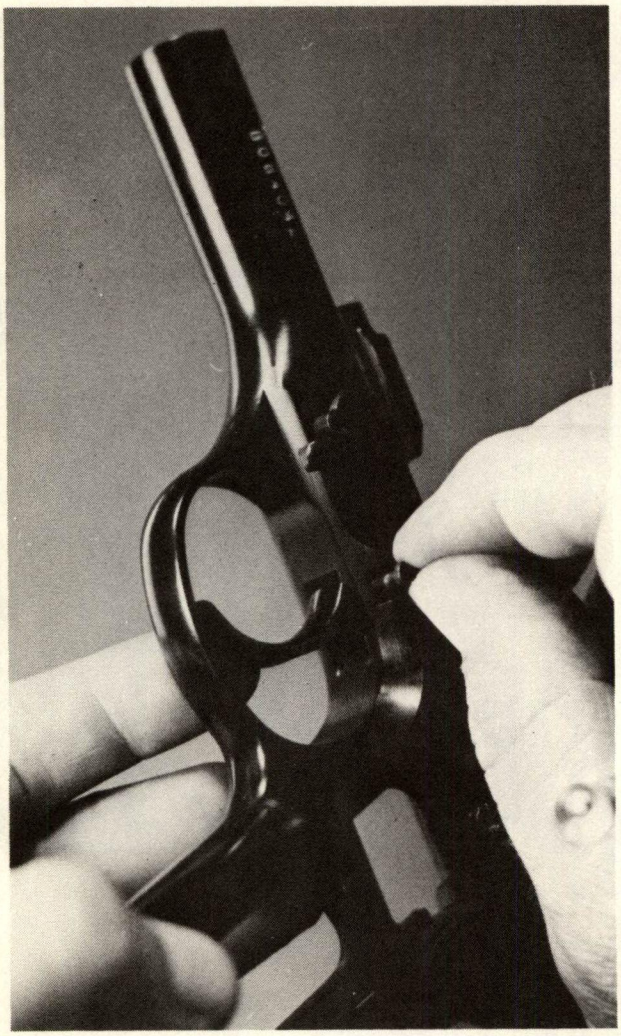


15. Depress the upper arm of the spring from its groove in the underside of the bar, and move it out toward the right. Remove the spring from its recess upward.

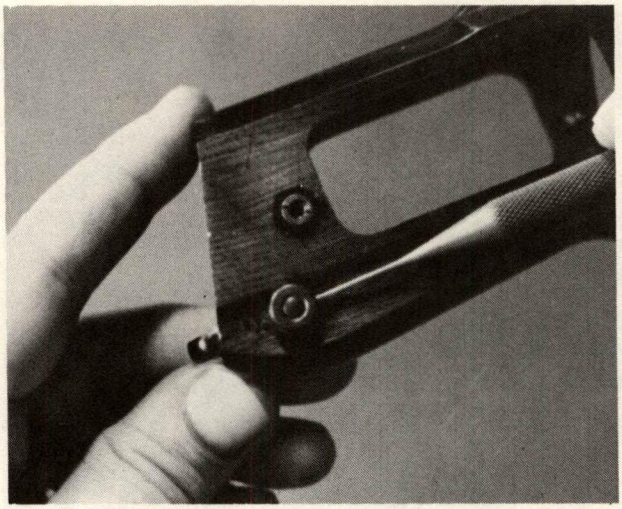


16. Remove the trigger bar toward the right side.

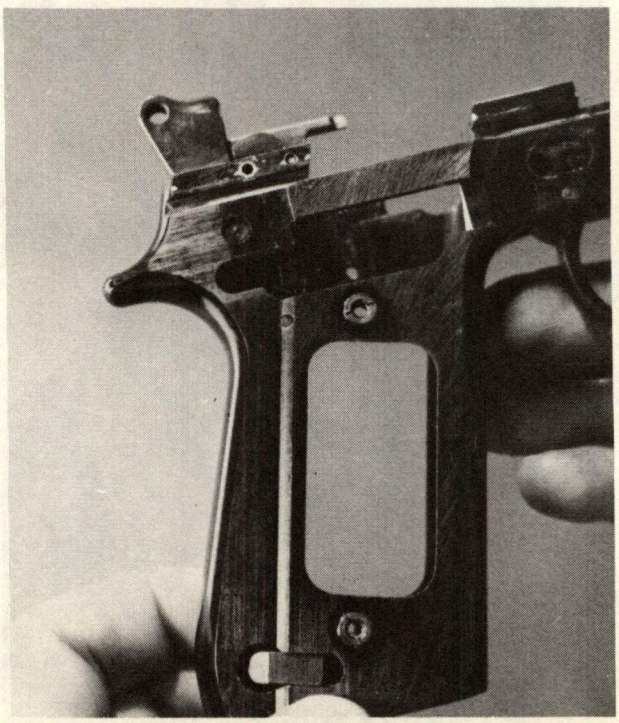
17. Removal of the slide latch and its spring will free the trigger pin to be taken out toward the left. The trigger and trigger spring are then removed up out of the frame.



18. The magazine catch button is retained on the cross-shaft of the catch piece by a vertical pin. When the pin is drifted out, the button and spring are removed toward the left, and the catch piece toward the right.



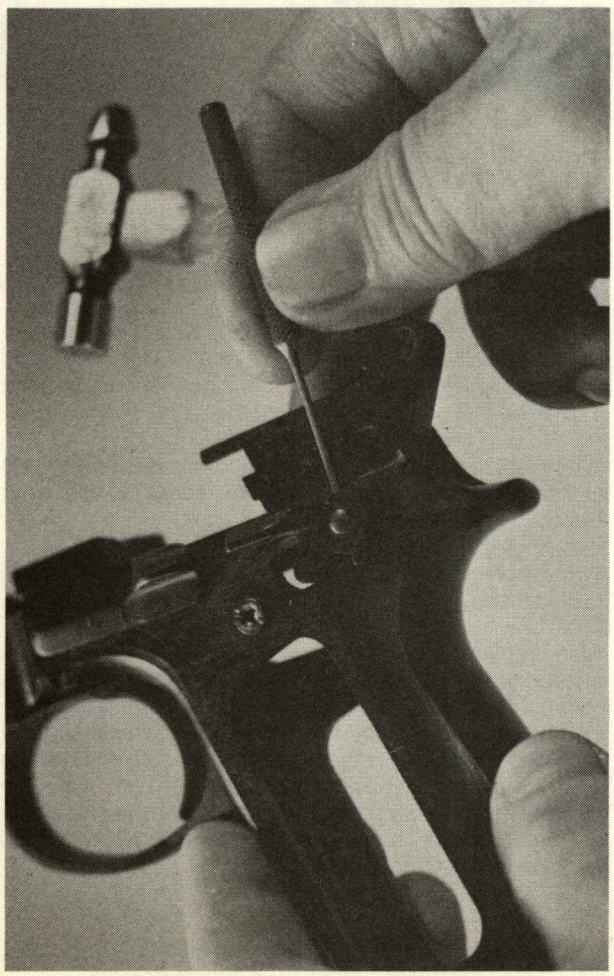
19. Drifting out the roll pin at the lower rear of the grip frame will free the plug which forms the housing and base for the mainspring. Removing the housing downward will relieve the tension of the mainspring and allow its removal. Drifting out the large pin at the upper rear of the frame will free the hammer and hammer strut for removal from the top. Drifting out the smaller pin at the rear, just below the upper frame opening, will release the sear and sear spring for removal forward, into the magazine well. The two small pins at the top of the frame retain the hammer-drop lever and the ejector, and these parts are removed upward.



Detail Strip—Variations

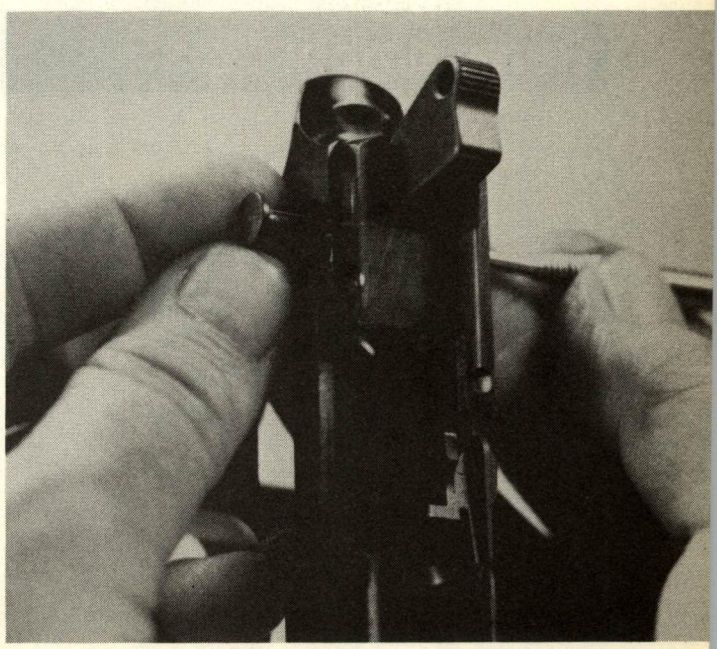
Original Beretta Model 92

Beretta Model 92F

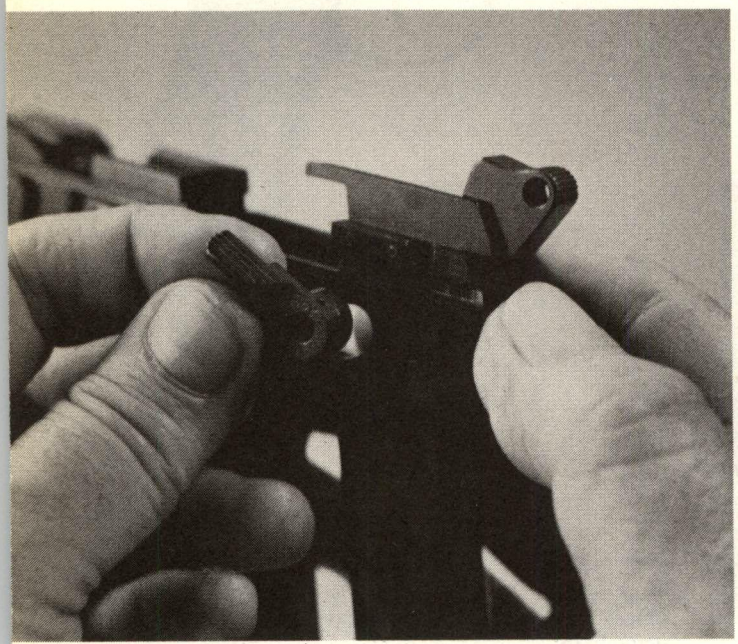


1. In the safety system of the original Model 92 (and the Taurus pistols), use a roll pin punch to drift out the small roll pin in the base of the safety-lever, downward.

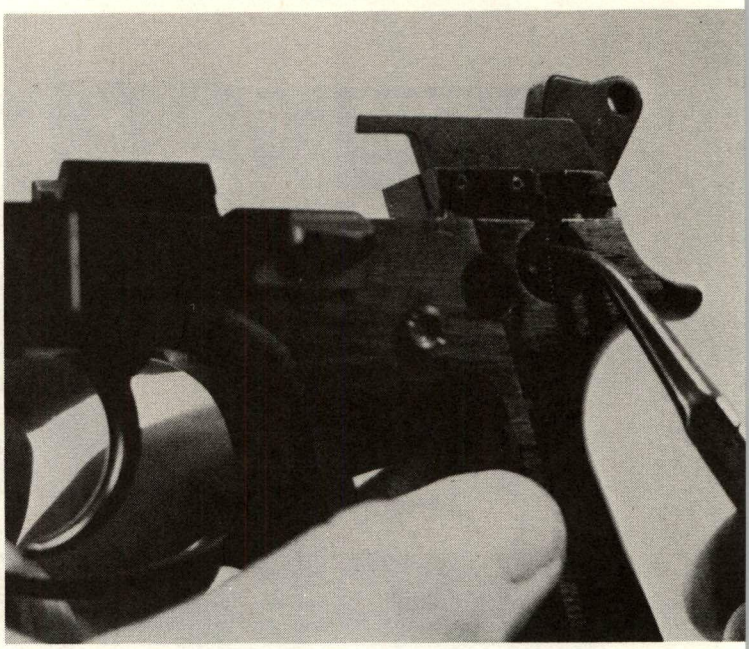
2. Push out the safety pivot shaft toward the right. (**Note:** It is assumed that at this point the trigger bar and its spring have been removed.)



3. Turn the safety-lever up to the on-safe position, and remove the lever toward the left. **Caution:** *The safety positioning plunger and spring will be released upward as the lever is taken out, so control them.*



4. Remove the positioning plunger and spring upward. In reassembly, a tool must be inserted to depress the plunger as the safety-lever is put back into place.



Reassembly Tips:

When replacing the trigger bar, insert a tool from the top of the frame to lift the rear arm of the trigger spring, hooking it over the inward projection of the bar.

When replacing the slide latch, remember that the rear arm of its spring must be lifted into its recess on the inner projection of the latch.

When replacing the firing pin and extractor, use a slave pin to hold these parts in place while driving in the retaining pin.

When replacing the safety in the slide, be sure that the flat of its back edge is aligned with the slant of the safety recess in the slide, and that the firing pin impeller is centered in the cross-piece of the safety. When everything is aligned, it can be pushed straight into the slide. When the right end of the safety reaches the lock plunger on the right side, the plunger must be depressed to pass under the end of the safety. When the safety is all the way in, it can be turned back down to normal position.

Beretta 950BS

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Beretta Model 950BS also apply to the following guns.

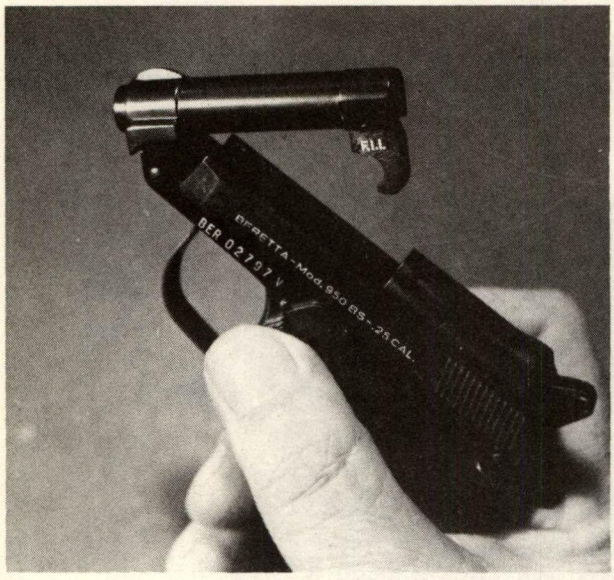
Beretta Model 950 **Beretta Model 950B**

Data:	Beretta Model 950BS
Origin:	Italy
Manufacturer:	Armi Beretta, S.p.A., Gardone (Brescia)
Cartridges:	22 Short and 25 ACP
Magazine capacity:	22—6 rounds; 25—8 rounds
Overall length:	$4^{5}/_{8}$ inches
Height:	$3^{3}/_{8}$ inches
Barrel length:	$2^{3}/_{8}$ inches
Weight:	10 ounces

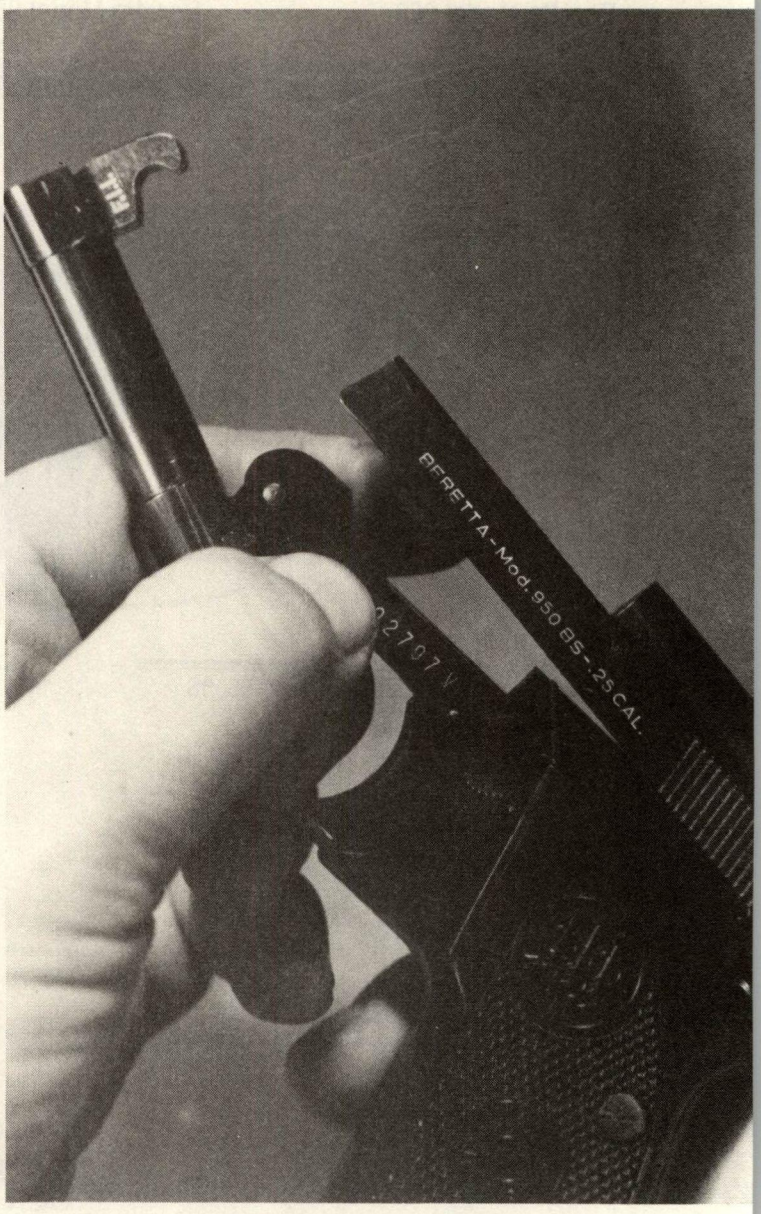
Importation of the original "Minx" (22-caliber) and "Jetfire" (25 ACP) pistols (Model 950B) was stopped by the GCA '68, but in 1978 U.S. production was begun, and a manual safety was added to the design, adding an "S" to the model designation. The current production, made in Maryland, is equal to the quality of the original Italian-made guns. Except for the added safety, the mechanical details of the guns are identical.

Field Strip:

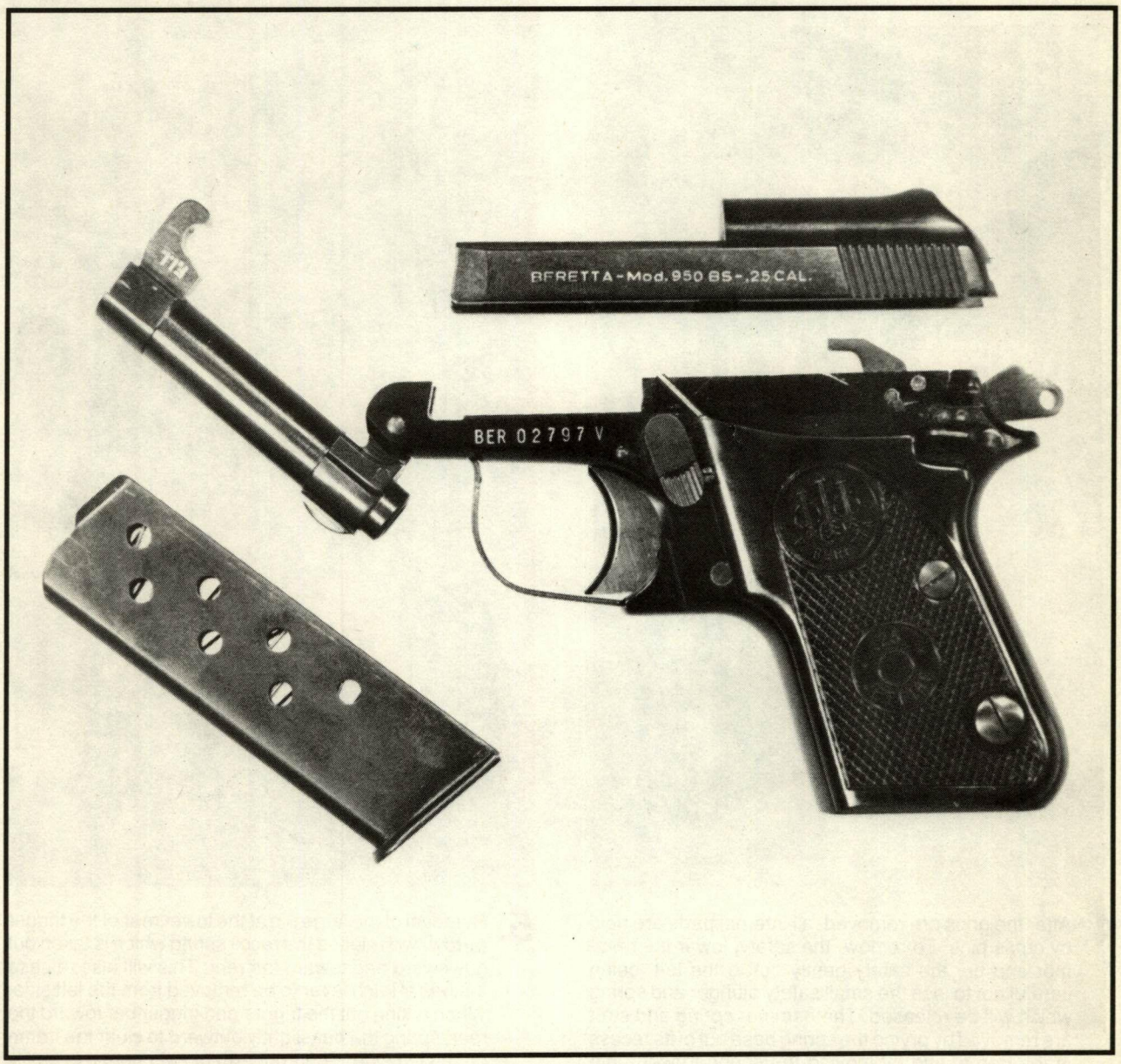
1. Move the barrel release forward, allowing the barrel to spring upward. Cock the hammer and remove the magazine.



2. Tip the barrel all the way over forward, beyond its normal opened position.

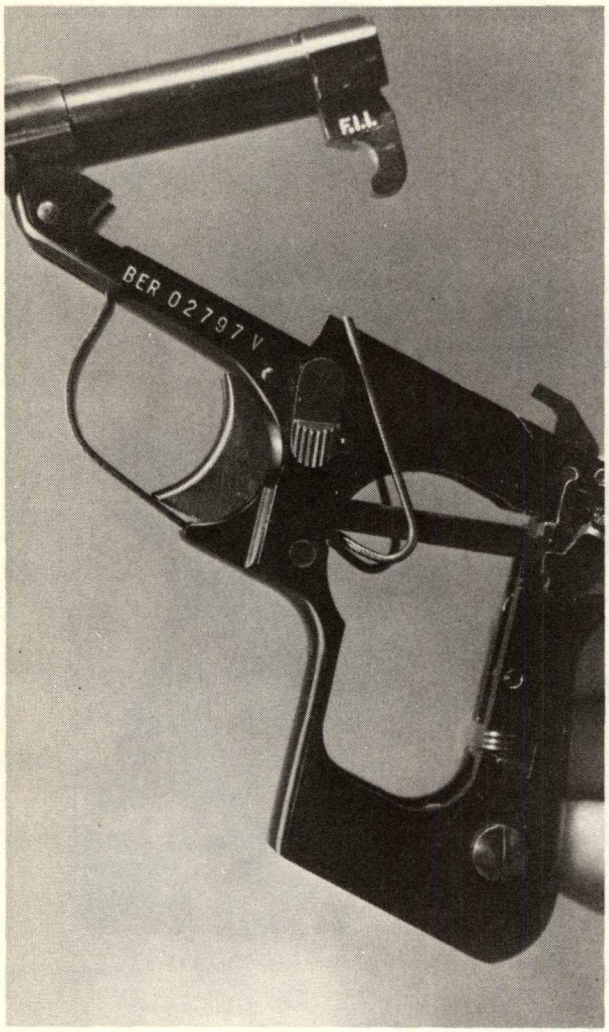


3. Lift the front of the slide, move it forward, and take it off the frame. **Gun is now field stripped.**

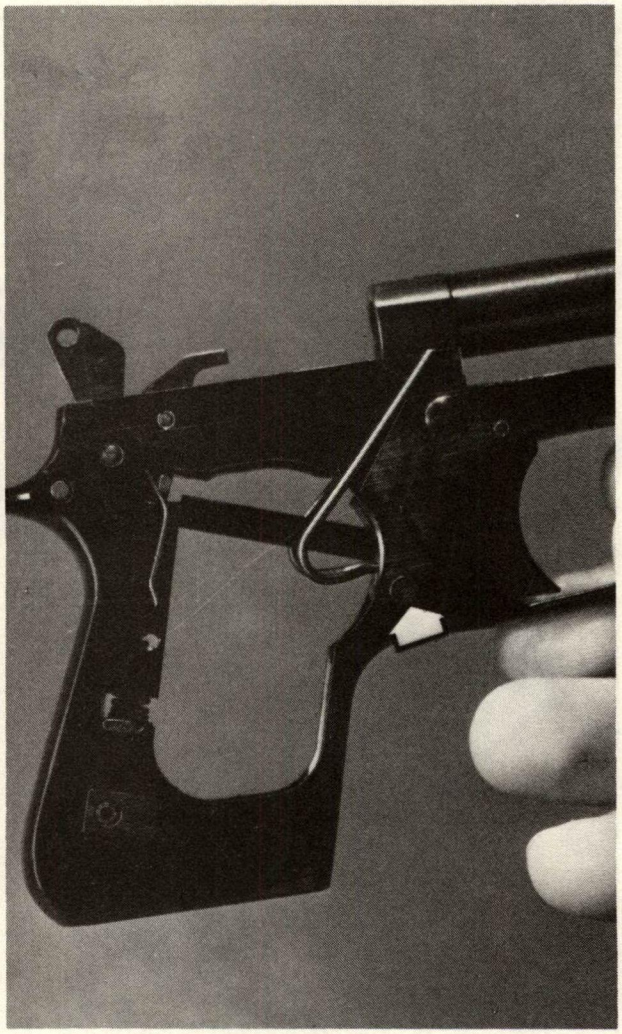


Beretta 950BS field-stripped

Detail Strip:



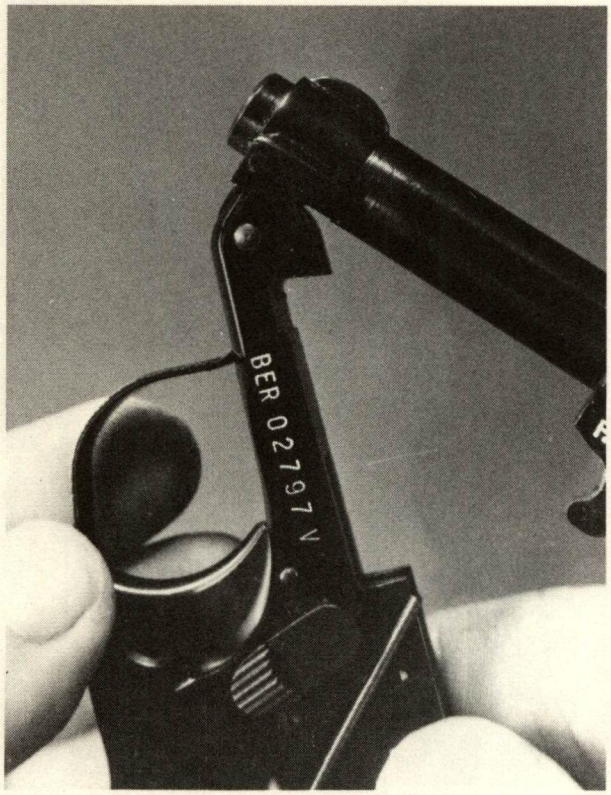
4. After the grips are removed, all internal parts are held by cross-pins. To remove the safety, lower the hammer and pry the safety gently out to the left, being careful not to lose the small safety plunger and spring which will be released. The hammer spring and strut are removed by prying the spring base out of its recess in the frame, and by moving the spring forward into the magazine well. The hammer pin must be pushed out from right to left, its left end being the post for the safety spring. Before removing pins, note the relationship of all parts to aid in reassembly.

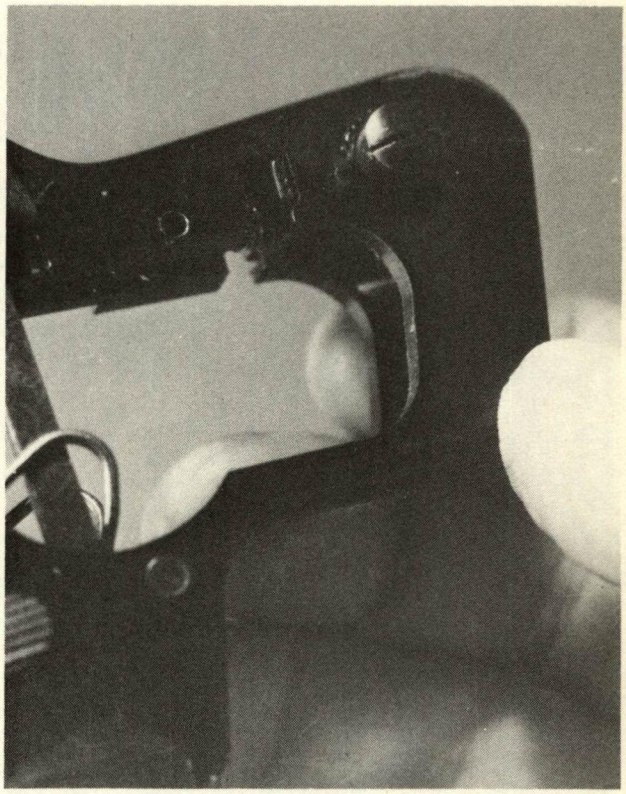


5. Removal of the large pin at the lower rear of the trigger (arrow) will release the recoil spring which is taken out downward and toward the rear. This will also release the barrel latch lever to be removed from the left side. When taking out the trigger and trigger bar toward the rear, spring the bar slightly outward to clear the frame on the left side. The front arm of sear spring is easily lifted from the right ear of the sear when the hammer is on the safety step. The spring can then be lifted from its recess in the frame.

6. Driving out the cross-pin at the front of the frame will release the barrel and the trigger guard, which also serves as the barrel spring. The rear of the guard fits into a recess in the frame, and is held in place by spring tension.

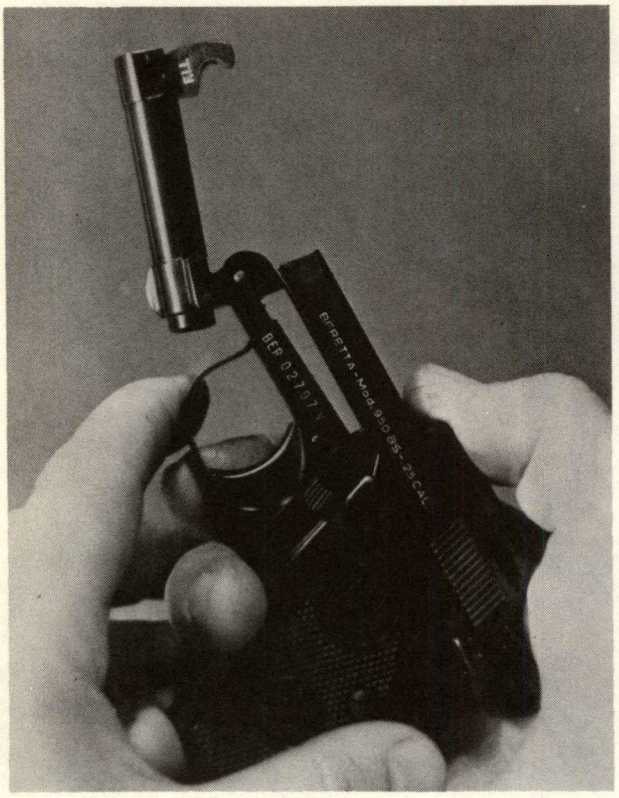
The firing pin is retained by a single vertical roll pin in the slide, and this should be driven out with a special roll pin drift punch.

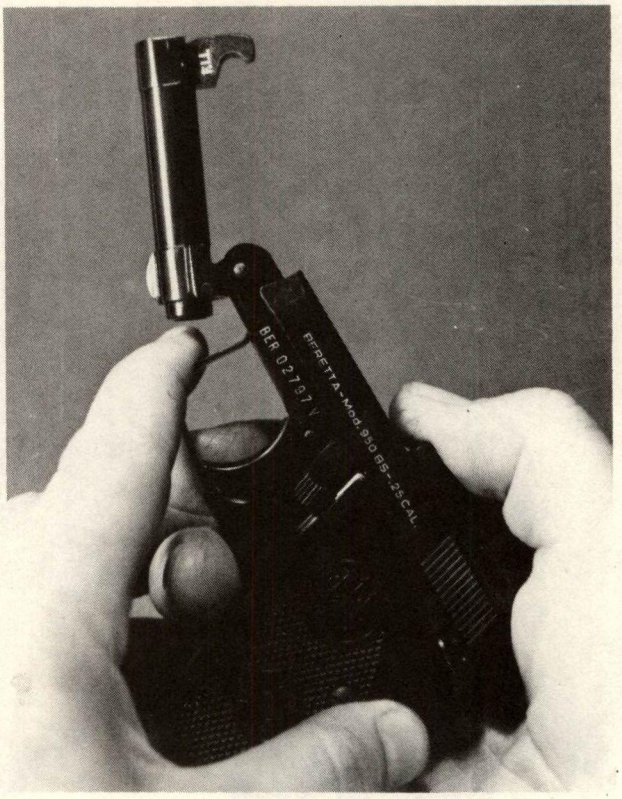




7. The magazine release button simply unscrews from the magazine catch on the opposite side of the frame, but removal may be difficult. A wide screwdriver with a very thin blade is necessary, and one may have to be ground to fit. Also, the threaded tip of the button will usually be hollowed and spread on the outside of the catch piece, and turning it out may require more than ordinary force.

Reassembly Tips:





1. When replacing the slide on the frame, set it on top of the frame in the position shown, being sure that the exposed ends of the recoil spring are in their notches on the underside of the slide, and the rear sidewings of the slide are positioned to enter the slide tracks on the frame. Then push the slide down and toward the rear, snapping it into place, and flip the barrel back over to the normal firing position.

When replacing the safety-lever on the frame, remember that the hammer must be down and the safety in the off-safe position for reinsertion. Use a small screwdriver to depress the safety plunger, and take care that it doesn't slip off, as the plunger is tiny and easily lost if it flies out.

When replacing the recoil spring, note that its internal loop must be positioned in *front* of the cross-shaft of the barrel release.

Remember that the hammer should be set on the safety step for easy reinsertion of the sear spring.

Beretta 951

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Beretta Model 951 also applies to the following gun.

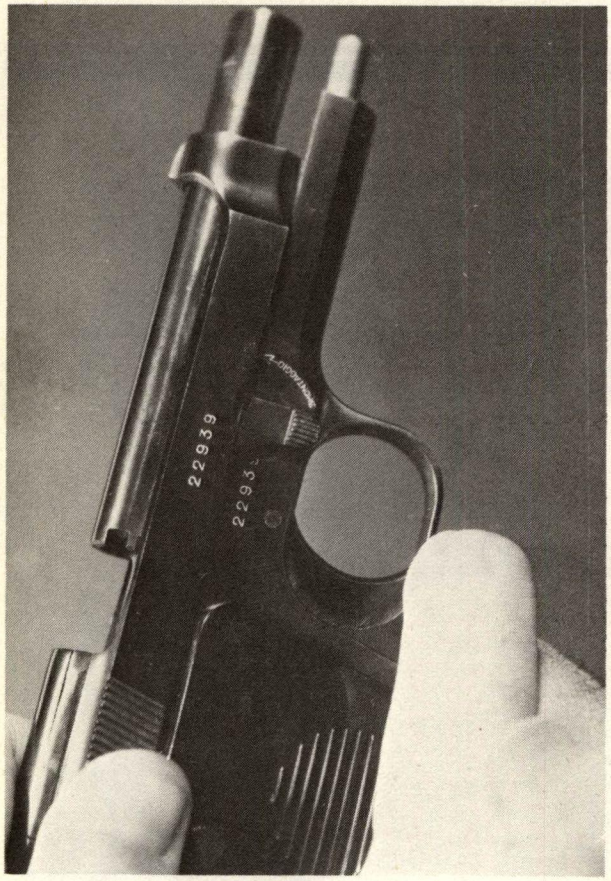
Helwan 9mm

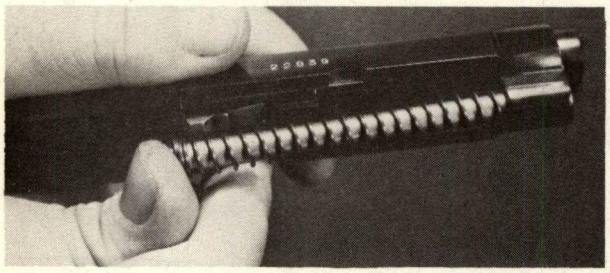
Data:	Beretta Model 951
Origin:	Italy
Manufacturer:	Armi Beretta, SpA, Gardone (Brescia)
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	8 rounds
Overall length:	$7^{15}/_{16}$ inches
Height:	$5^{3}/_{8}$ inches
Barrel length:	$4^{9}/_{16}$ inches
Weight:	31 ounces

The last effort of Beretta's master designer, the late Tullio Marengoni, the Model 951 was marketed in the U.S. as the "Brigadier." Although it has been replaced in the Beretta line by later models, the Model 951 is still very much in use with the military services of Italy, Israel, and Egypt. The Egyptian military version has some mechanical differences from the others, but as these guns are rarely seen in the U.S. these factors are not noted here.

Field Strip:

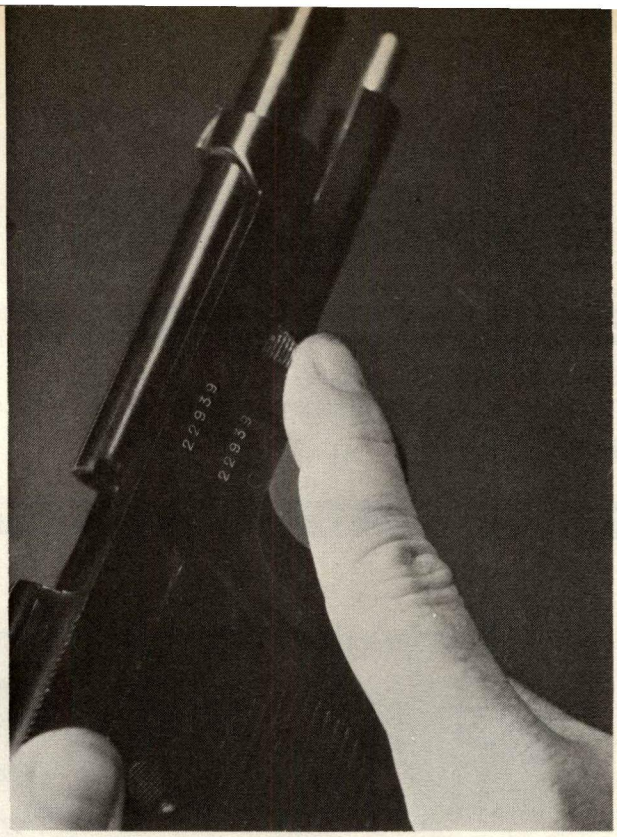
1. With the hammer cocked and the magazine removed, pull the slide back until the semi-circular cut in its right lower edge aligns with the front of the takedown-lever, located just forward of the trigger on the right side.



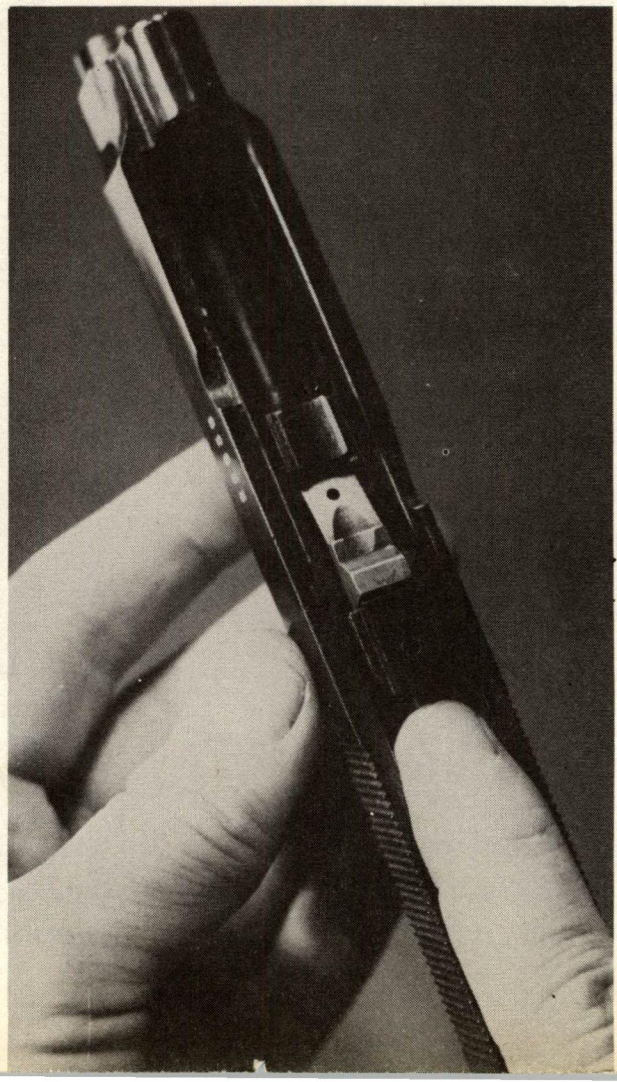


3. Lift the rear of the recoil spring guide from its step on the locking block and remove the guide and spring toward the rear.

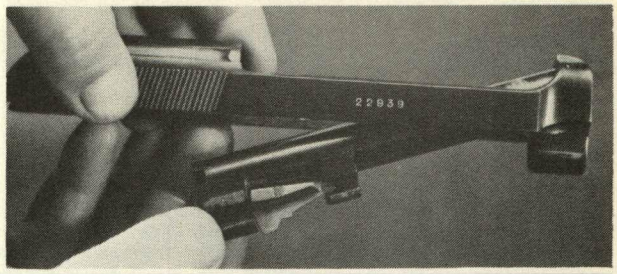
4. Push the plunger at the rear of the barrel assembly to move the locking block from its recesses in the slide.



2. While holding the slide in position, turn the takedown-lever forward and up. Run the slide assembly forward off the frame.



5. Move the barrel forward to clear the extractor, then remove the barrel downward from the slide. **Gun is now field-stripped.**

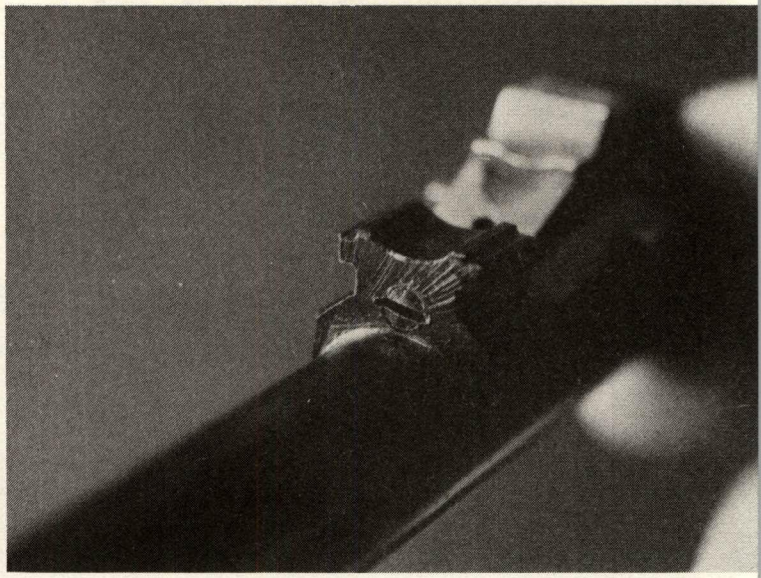


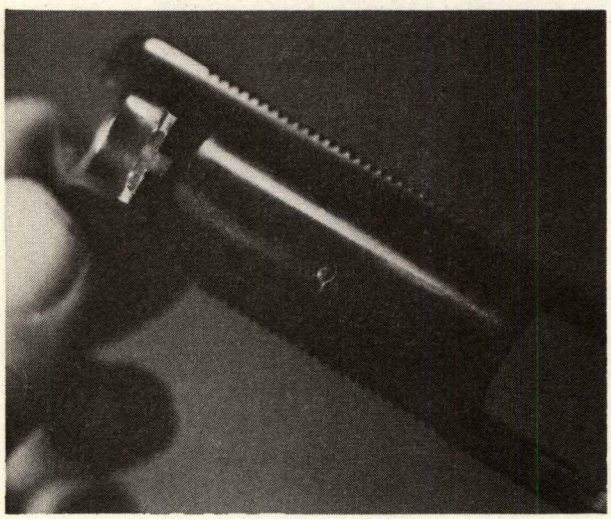
Beretta 951 field-stripped

Detail Strip:

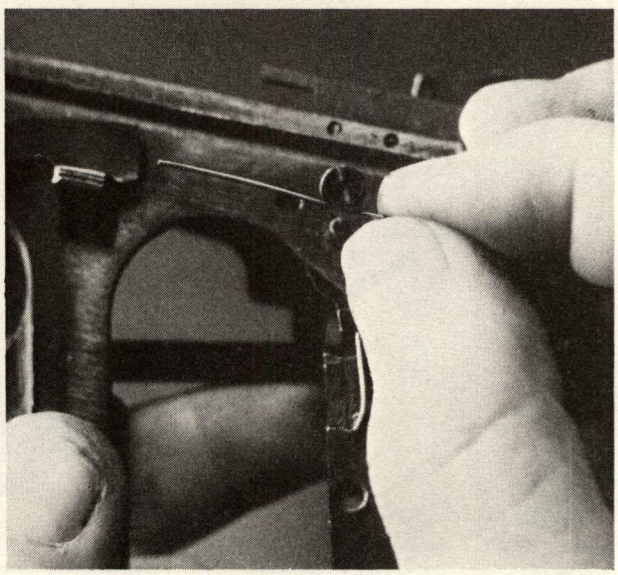
6. The takedown-latch is retained in the frame only by friction from a circular spring on the right side, and the latch is easily pulled out toward the right.

7. The locking block is retained by a screw at the front of the barrel underlug. After removal of the screw, the block can be tipped outward to its limit and slid off toward the side. Note that the screw is staked at the factory and routine removal is neither easy nor advisable. The locking block plunger at the rear is also staked in place and the same advice applies. If necessary, it can be drifted out toward the rear.



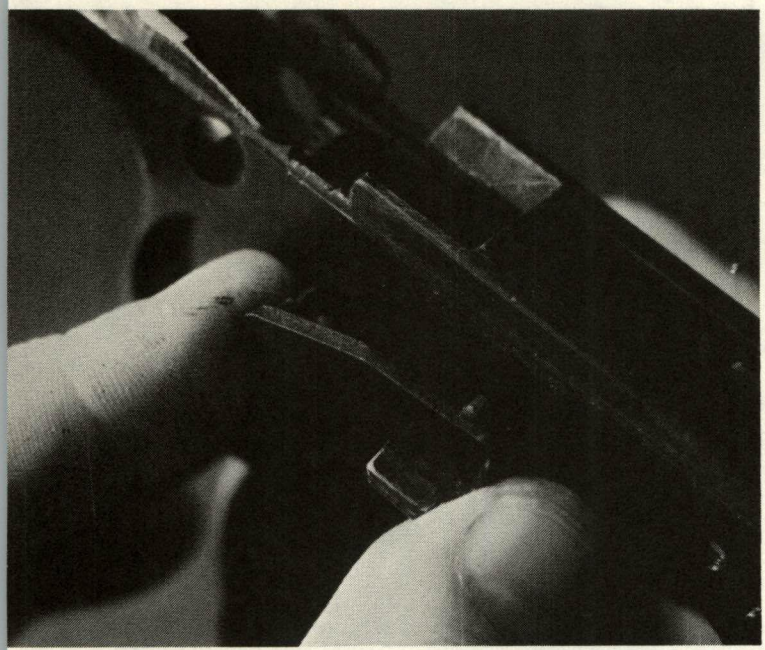


8. A slanting pin in the rear section of the slide retains both the extractor and the firing pin, and their springs. The pin slants toward the right side and must be driven upward, out the top of the slide.



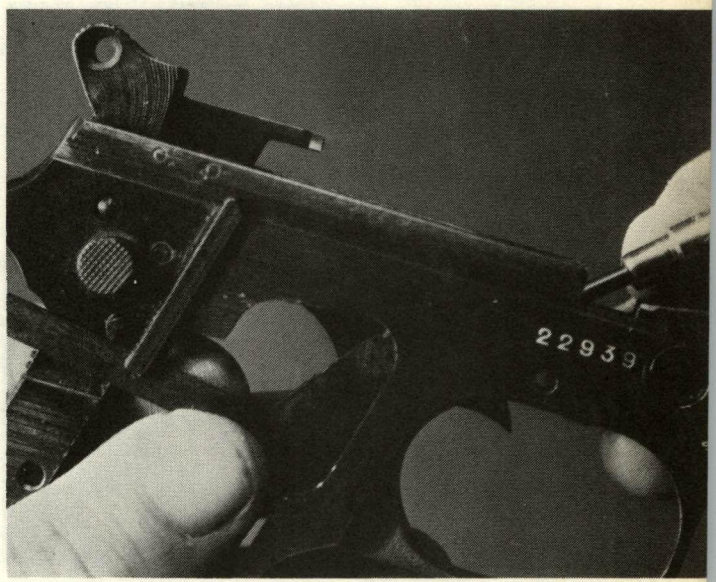
9. The torsion spring which powers the slide-latch is mounted on the left side of the frame by a screw, and is easily removed.

10. The cross-shaft of the slide-latch is also the trigger pivot, and will release the trigger when the slide-latch is removed toward the left.



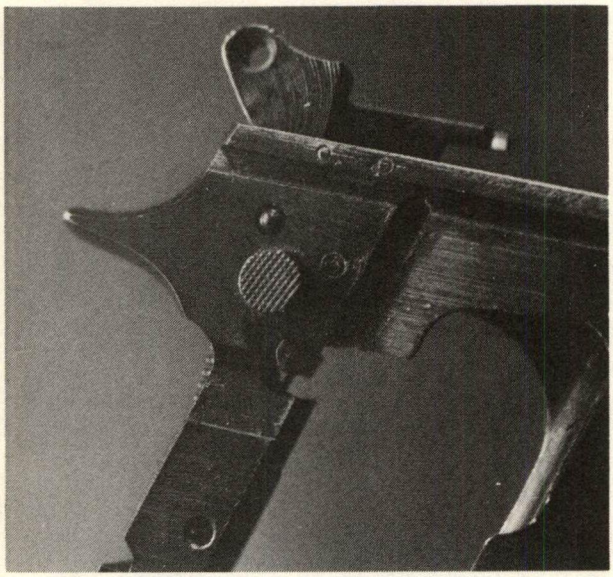
12. After the trigger is taken out, the trigger bar can be separated from it by drifting out the small pin at the lower rear of the trigger. **Caution:** *When the pin is removed, a strong spring and plunger will be released from inside the trigger.* Be careful, and ease them out.

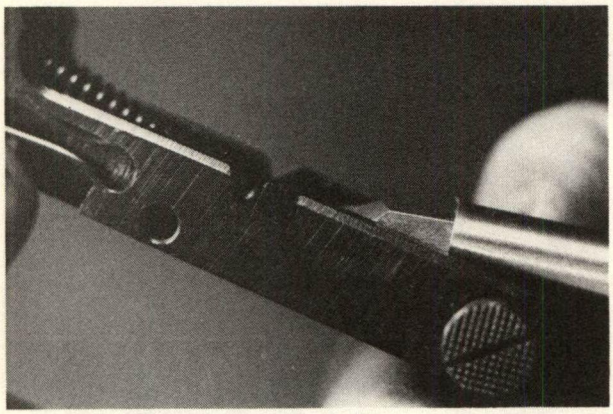
11. The trigger and trigger bar are removed toward the rear, into the magazine well. Removal is easier if a tool is inserted from the top, as shown, to tip the top of the trigger forward as it is moved toward the rear.



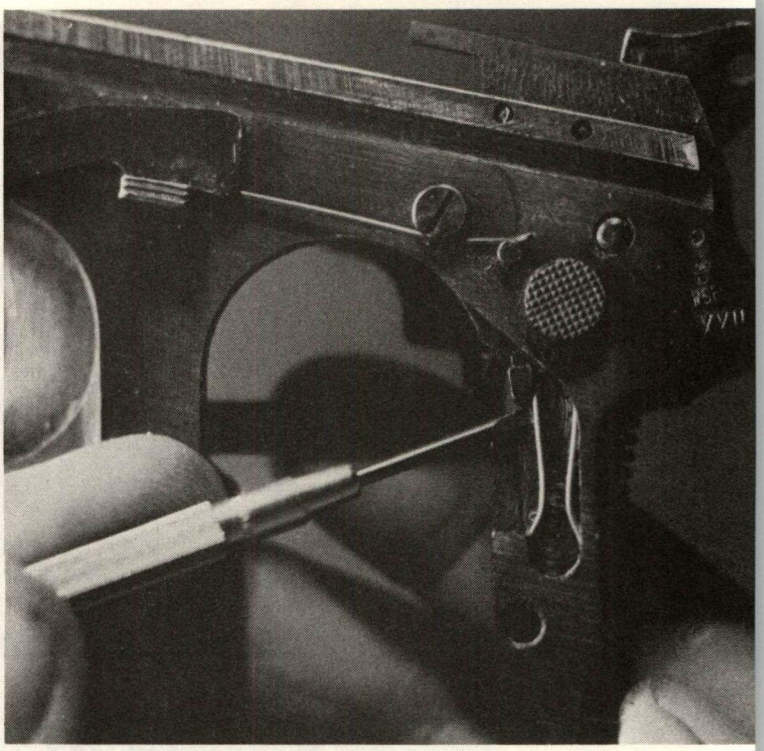
13. The disconnector is slid downward out of its recess in the frame.

14. The large pin at the upper rear of the frame is the hammer pivot, and the smaller pin, near the disconnector recess, retains the sear. Before drifting out either of these pins, the sear and hammer springs must be removed.

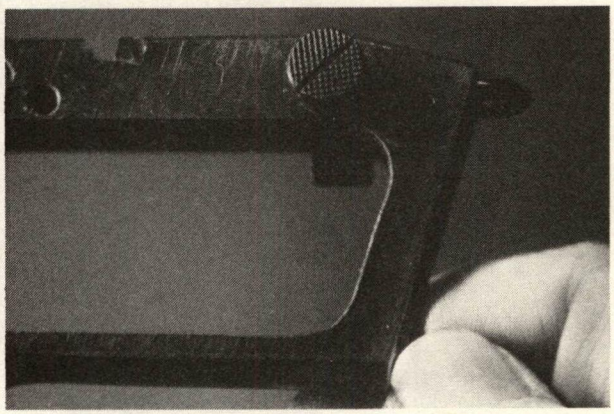




15. To remove the sear spring, lift its front arm from behind the left wing of the sear, and pry its rear arm forward from beneath the frame shelf. The rear arm of the sear spring is the detent for the cross-bolt safety button. The two small pins at the top of the frame retain the ejector.

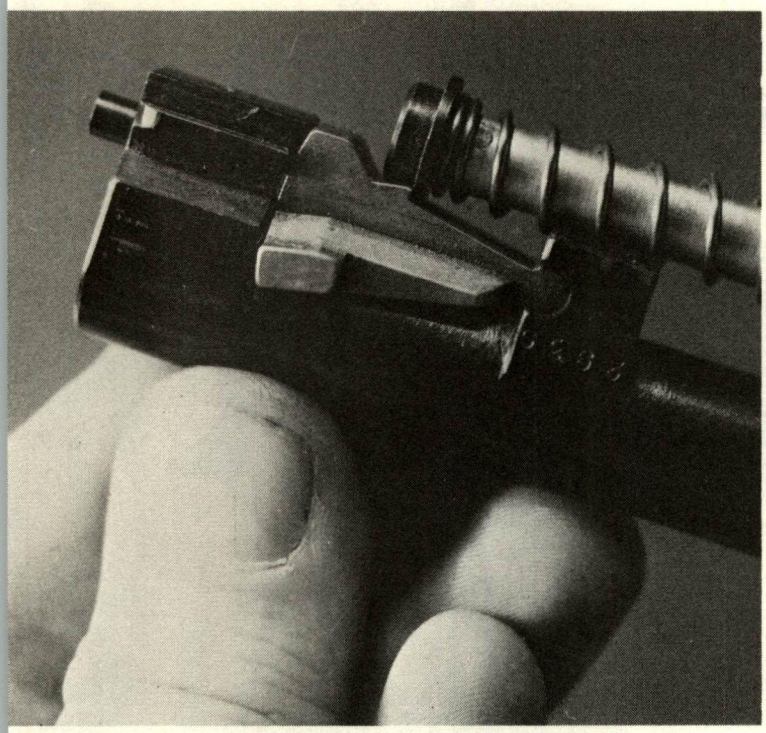


16. To remove the hammer spring, let the hammer down and use a large screwdriver to lift the hammer spring base out of its recess in the backstrap and lever it out toward the rear. The spring, hammer strut, and base will stay together, as the base must be rotated 90 degrees to free the spring and strut. If this is done, be careful, as the spring is under compression even when at rest. The hammer pin can now be removed, and the hammer taken out the top of the frame. After the sear pin is drifted out, the sear is removed forward, into the magazine well. With the hammer and sear taken out, the cross-bolt safety is easily removed from its hole in the frame.



17. The magazine release button is simply unscrewed from the catch bar on the opposite side, but this may require some force as the right tip of the button shaft is usually riveted on the outside of the catch bar. The button and spring are removed toward the left, the catch bar toward the right.

Reassembly Tips:



1. When replacing the recoil spring and guide, be sure the collar at the rear tip of the guide engages its step on the locking block. With both parts removed from the slide, this photo shows the proper engagement.

When replacing the trigger in the frame, use a reverse version of the same system as used in removal, tipping the top of the trigger forward as it is moved back in.

When replacing the firing pin and extractor in the slide, use a slave pin to hold the parts in place while driving in the original pin.

Before running the slide back onto the frame, be sure the takedown latch-lever is turned up and toward the front.

Beretta 1934

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Beretta Model 1934 also apply to the following guns.

Beretta Model 1931
Beretta Cougar
Beretta Model 1932
Beretta Puma
Beretta Model 1935

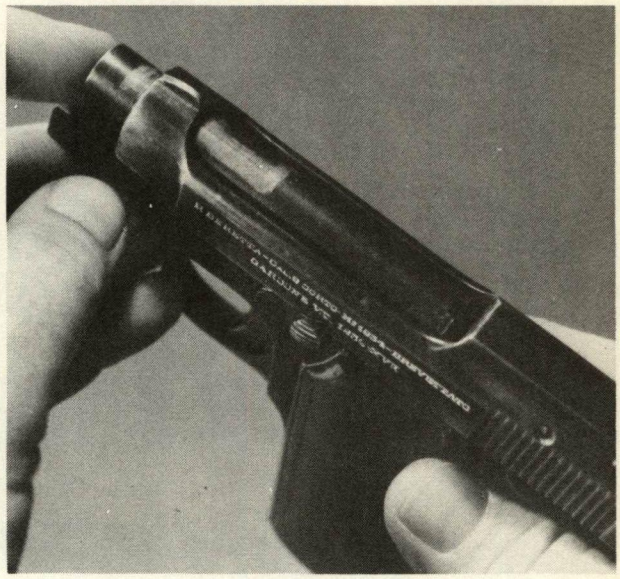
Data:	Beretta Model 1934
Origin:	Italy
Manufacturer:	Pietro Beretta, Gardone (Brescia)
Cartridge:	7.65mm (32 ACP), 9mm Corto (380 ACP)
Magazine capacity:	7 rounds
Overall length:	5 7/8 inches
Height:	4 7/8 inches
Barrel length:	3 1/2 inches
Weight:	23 ounces

The Beretta Model 1934 was the standard sidearm of the Italian Army from the year of its introduction until 1951, when it was replaced by the excellent Model 951. In 1935, a 7.65mm (32 ACP) version was also produced and used principally by the Italian Air Force. The two guns are identical except for caliber. The Model 1934 was also sold commercially in the U.S. after World War II as the Cougar and Puma. The rare Model 1931 and Model 1932 are seldom seen outside of collections. It is one of the most rugged and reliable pistols ever made. Mechanically, all models are the same.

Field Strip:

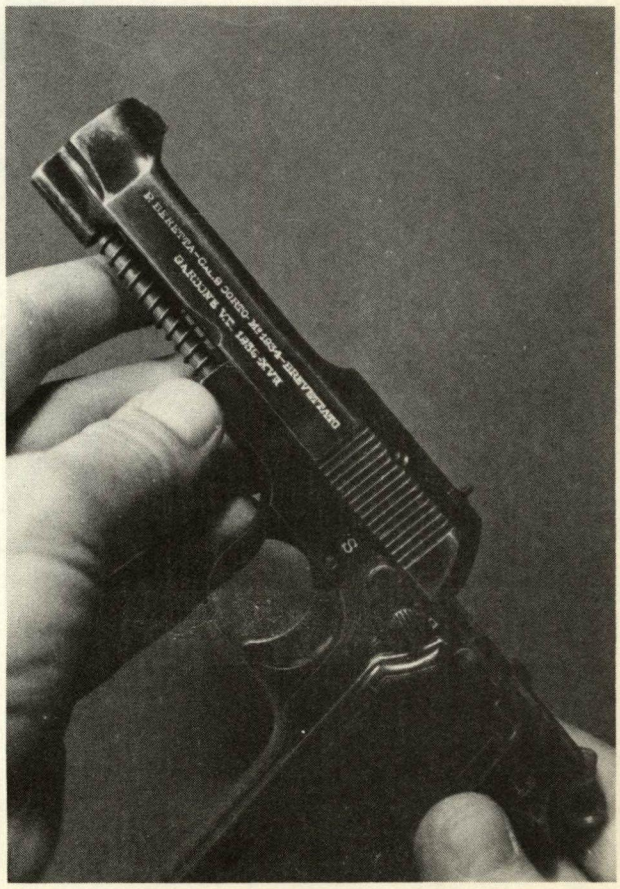
1. With the magazine removed, turn the safety to the rear on-safe position, and lock the slide open.

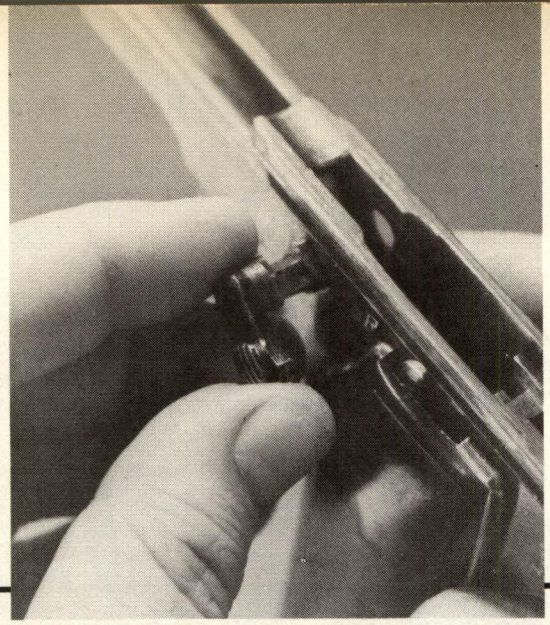
2. Push the barrel straight to the rear. **Note:** Some barrels may be tight in the mounting slots, and will require a light tap with a plastic hammer to start them back.



3. Lift the barrel at the rear, and remove it from the top of the slide.

4. Holding the slide against recoil spring tension, release the safety and run the slide forward off the frame. Remove the recoil spring and guide.



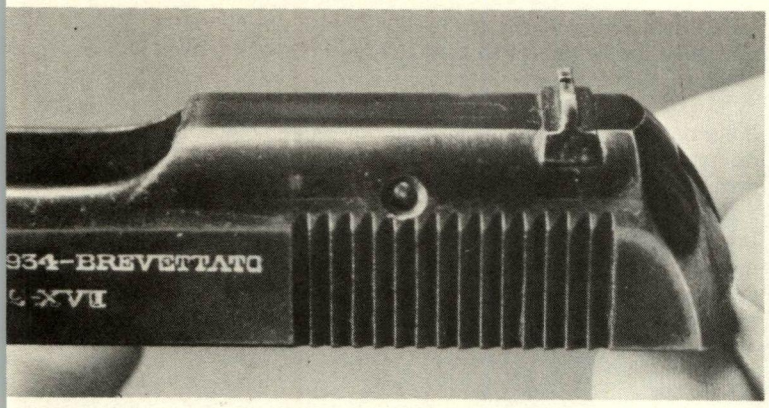


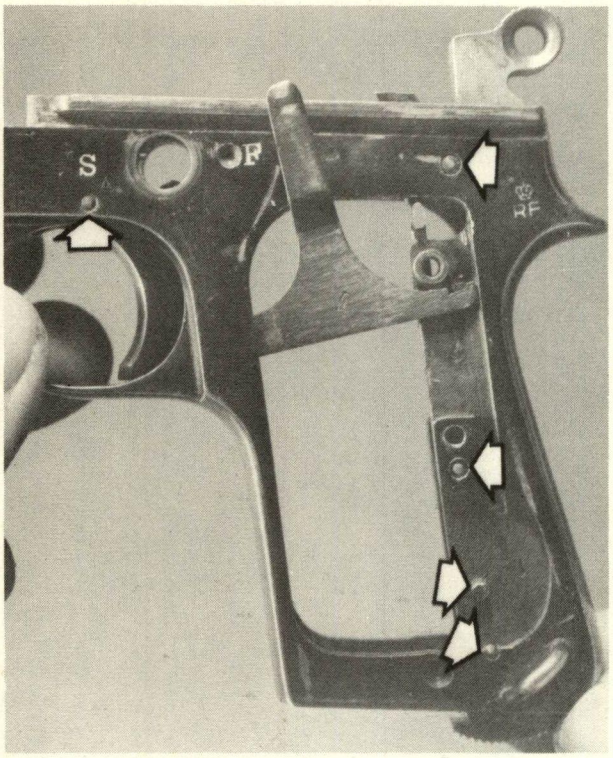
5. Remove the safety-lever from the left side of the frame. **Gun is now field-stripped.**

Beretta 1934 field-stripped

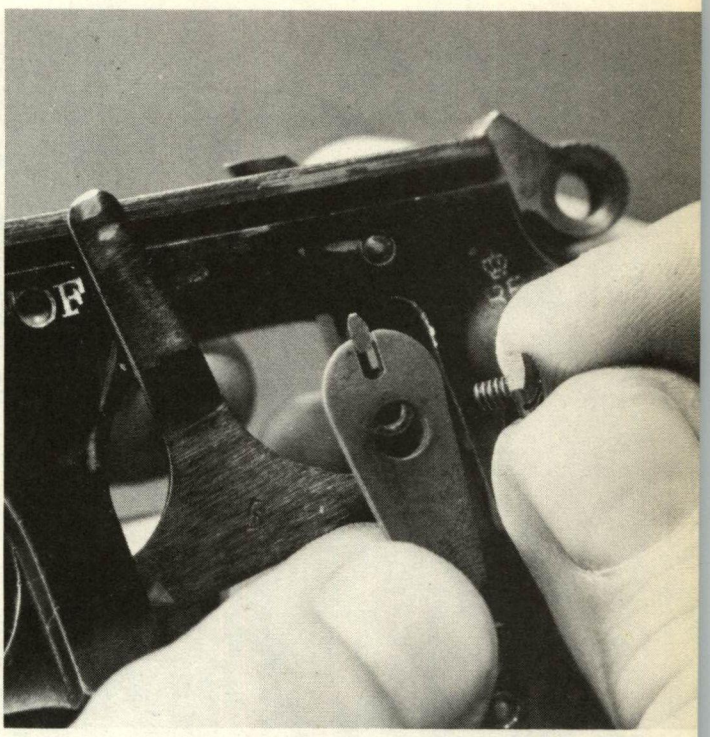
Detail Strip:

6. A single cross-pin in the slide retains both the firing pin and the extractor. Drifting out this pin will release both parts, and their springs.



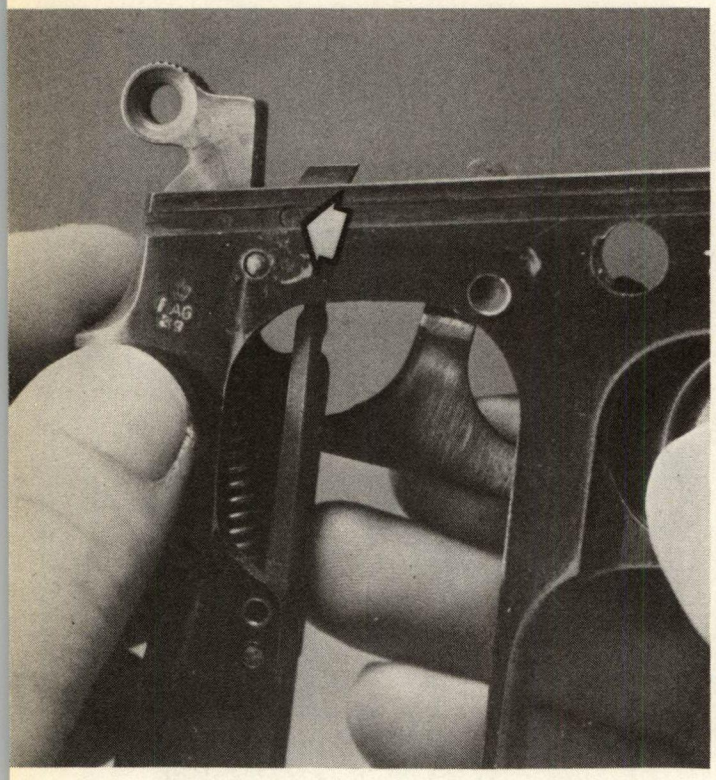


7. After the grips are removed, take out the hexagonal-head screw on the left side and lift the flat sear lever from the frame.



8. Cross-pins retain the trigger, hammer, and sear (arrows, left to right). The trigger is removed toward the rear, and its disconnector bar must be sprung slightly outward to clear the frame. After taking out the hammer and sear pins, the hammer is removed from the top, and the sear toward the magazine well. The hammer spring and follower are a captive unit on the sear. Knocking out the two pins at the lower rear of the grip frame will release magazine catch and spring.

9. The cross-pin at the top of the frame, visible in the slide track, retains the ejector.



Reassembly Tips:

Install sear and hammer spring unit before the hammer, and push the hammer into place for insertion of the pivot pin.

If the barrel is tight, trip the slide to drive it into place, but do not rotate the safety beyond the on-safe position while doing this.

Install the firing pin and extractor with the slide and barrel mounted on the gun. Use the lowered hammer to hold the firing pin in place while inserting the extractor and cross-pin. Be sure the firing pin is oriented with its retaining notch at the top.

Bersa 383

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Bersa Model 383 also apply to the following guns.

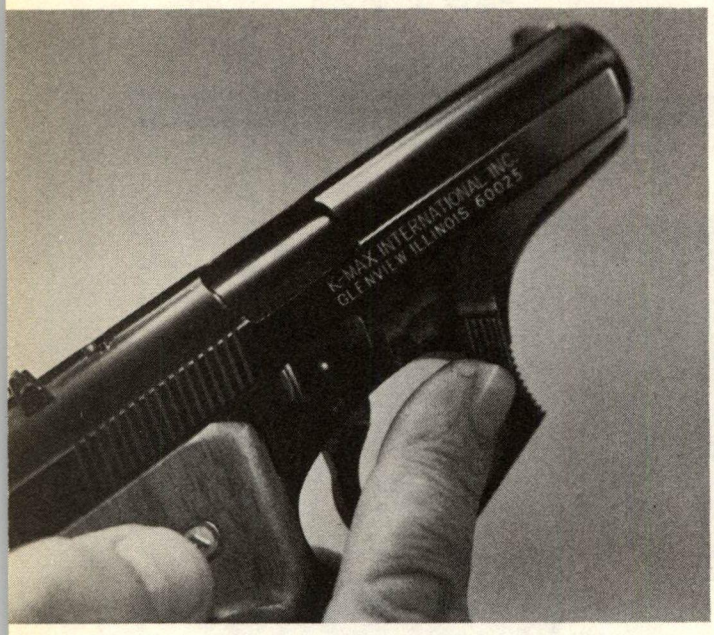
Bersa Model 223
Bersa Model 224
Bersa Model 225
Bersa Model 226
Bersa Model 323

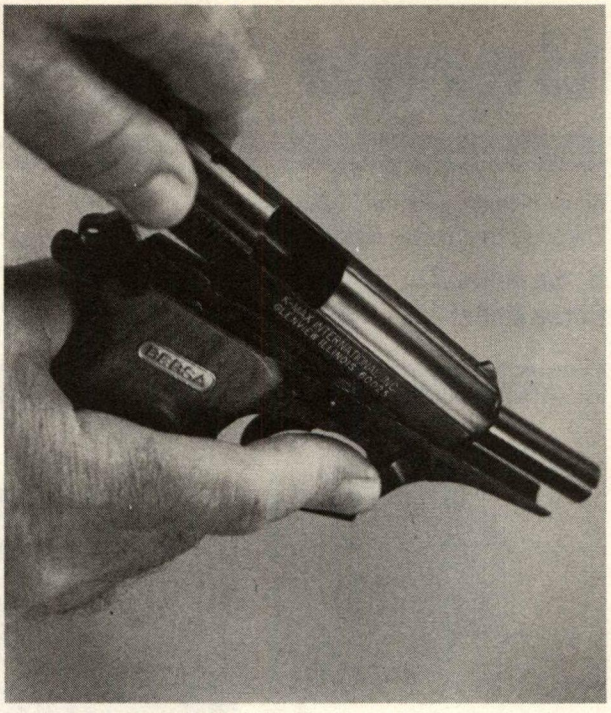
Data:	Bersa Model 383
Origin:	Argentina
Manufacturer:	Bersa, Ramos Mejia
Cartridge:	380 ACP
Magazine capacity:	7 rounds
Overall length:	6.61 inches
Height:	4.72 inches
Barrel length:	3.5 inches
Weight:	24.34 ounces

The earlier single-action Bersa pistols were well made and reliable, but they lacked cosmetic appeal. The current double-action models go far in the other direction—they are beautiful guns. There is a 32 ACP version, and there are four 22 Long Rifle pistols, in varying barrel lengths. The 22-caliber counterpart of the gun shown here is the Model 223. The instructions apply to all six models. On the longer-barreled 22-caliber pistols, the muzzle nut and front sight must be taken off during disassembly. Otherwise, they are the same.

Field Strip:

1. With the magazine removed and the hammer cocked, push the lever on the right side of the frame downward and forward until it stops. On some Bersa pistols, it will stay in that position. If not, hold it there.



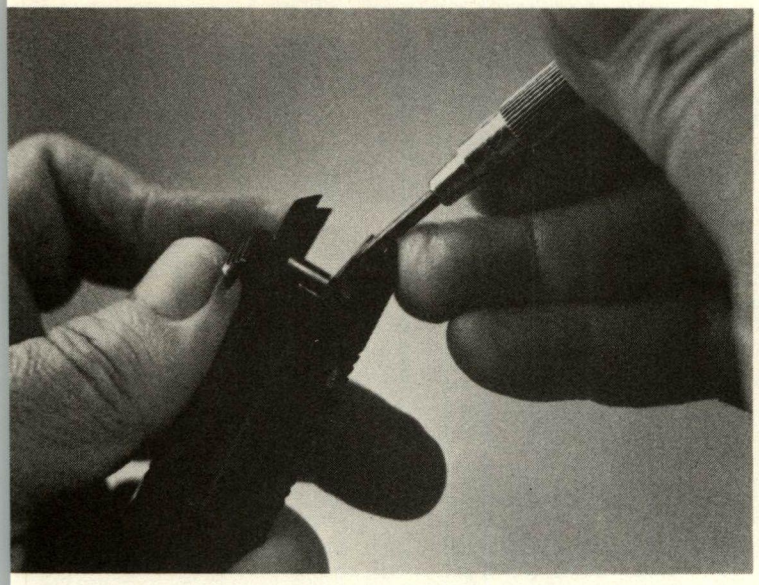


2. Draw the slide back all the way and lift it up at the rear. The slide can then be moved forward off the barrel and frame, and the recoil spring can be removed from the barrel. **Gun is now field-stripped.**

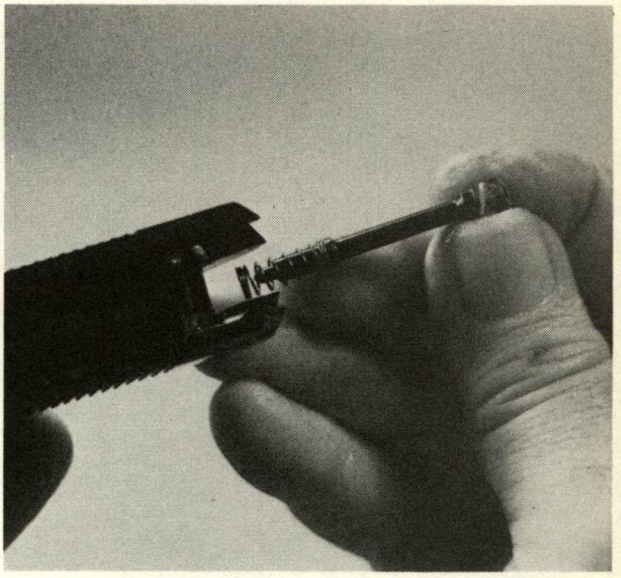
Bersa Model 383, field -stripped

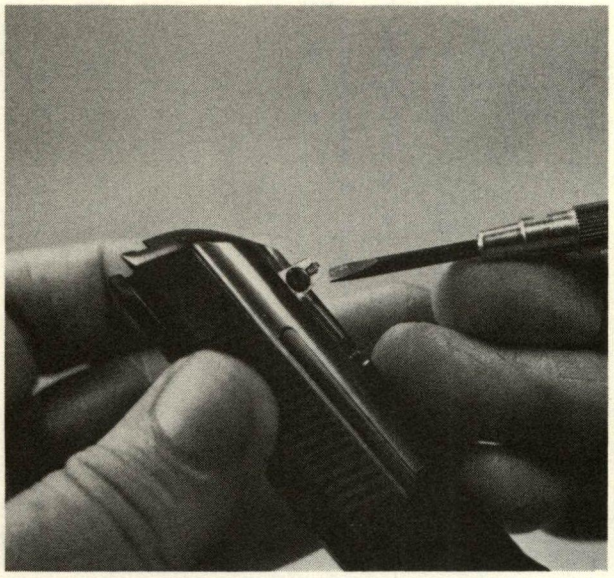
Detail Strip:

3. With the manual safety in mid-position, use a small tool to push it out toward the left. During removal, keep the lever in the same mid-orientation, to prevent the detent plunger from entering the various recesses in the cross-piece.

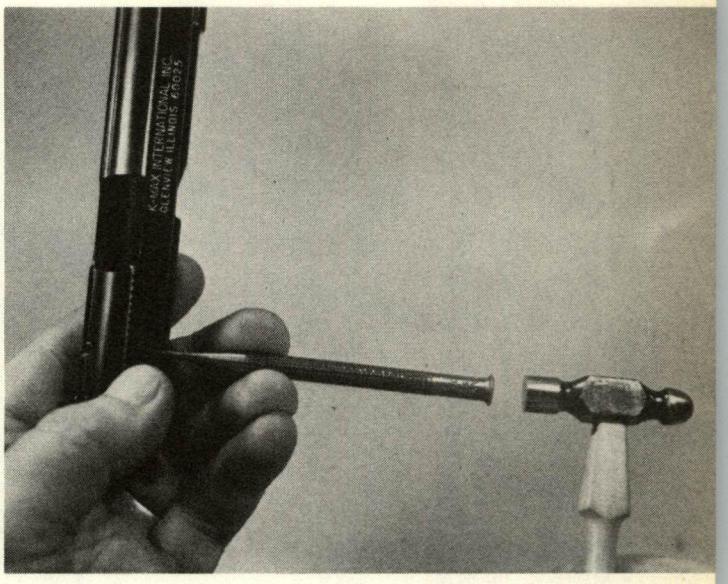


4. The firing pin and its spring can now be removed toward the rear. If necessary, the safety detent plunger and its spring can be nudged out of the recess in the slide, downward and toward the rear.



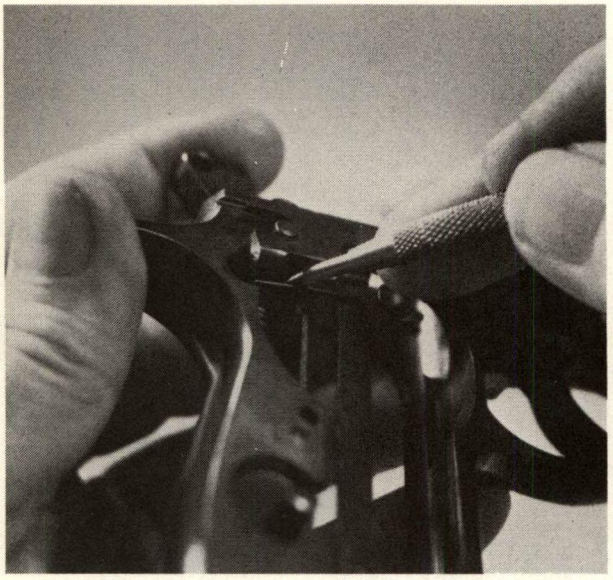


5. With a non-marring tool, the rear sight can be drifted out of its dovetail toward the right. The sight leaf can be taken out of the base by backing out the adjustment screw. Take care that the small coil spring behind the bottom of the leaf isn't lost.

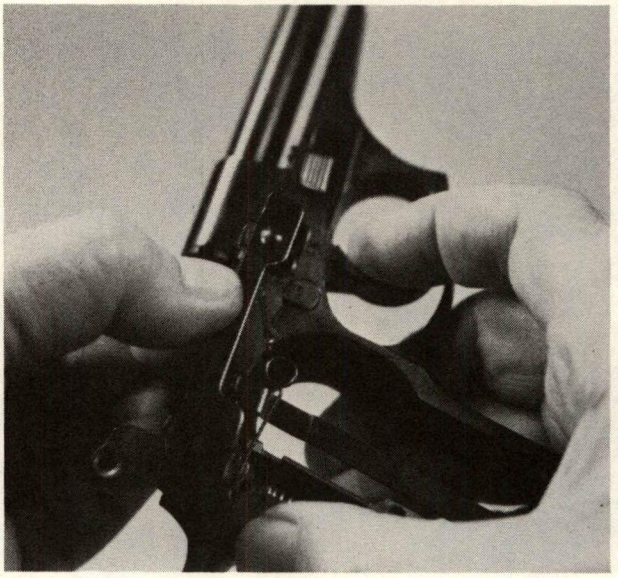


6. The extractor is pivoted and retained by a vertical pin on the right side of the slide. The pin is driven out upward. The extractor and its spring can then be taken off toward the right.

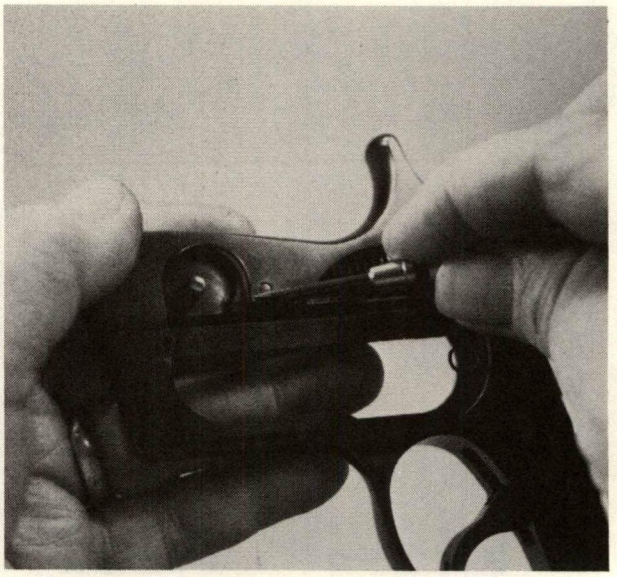
7. The grip panels may be tightly fitted—use care in removing them. The grip stabilizing pin is a loose fit in the frame, but it has a serrated center section to keep it from falling out when the grips are off. The pin can be driven out, if necessary. Disconnect the trigger bar spring from its notch in the underside of the trigger bar at the rear, and move it inward.



8. Pull the trigger a very small distance, and remove the trigger bar toward the right.

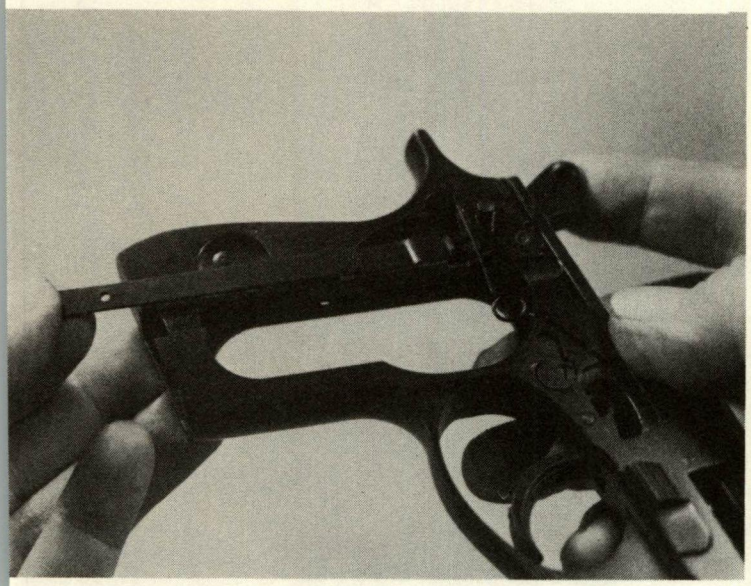


9. The trigger bar spring is staked in place. Unless removal is necessary for repair, it is best left in place.

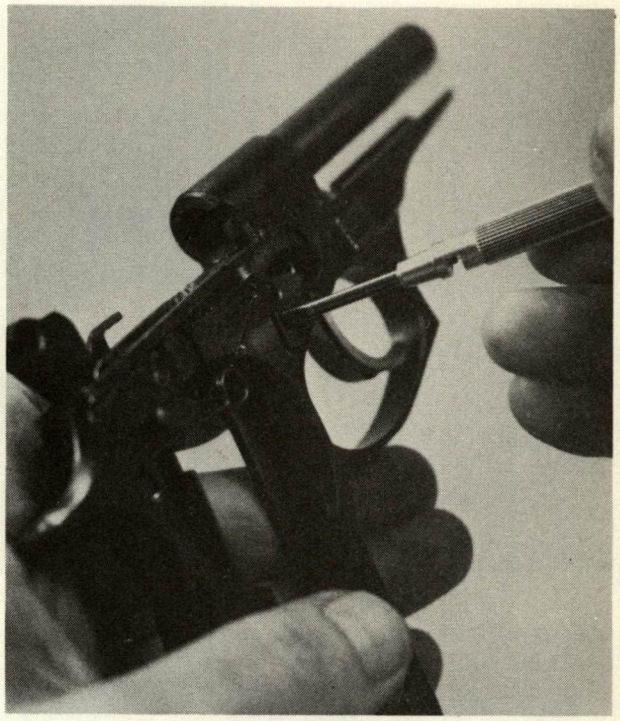


10. Use a tool to push the upper tip of the magazine safety spring out of engagement with its notch in the frame, and tilt the spring outward to remove it. **Caution:** *The spring is under tension, so be sure to control it.*

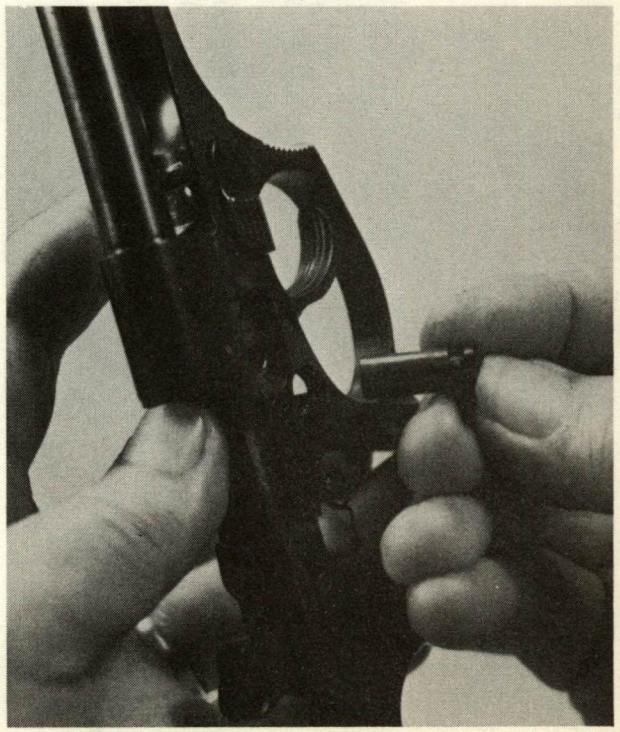
11. Move the magazine safety bar downward until it clears its cut in the frame, and lift it off the frame.



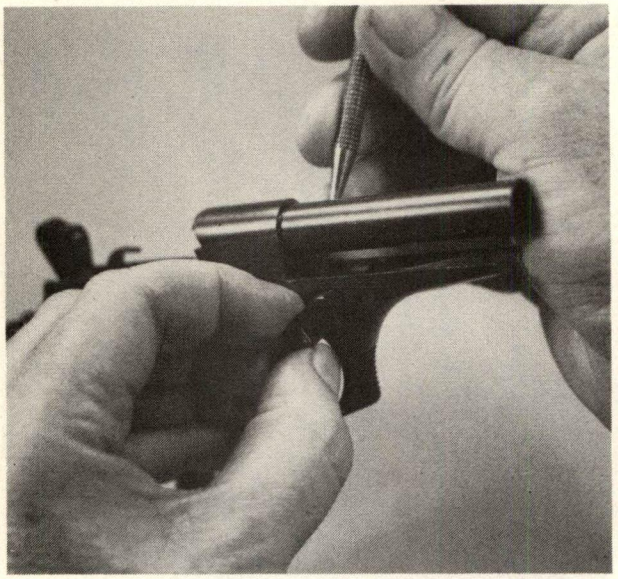
12. To remove the magazine catch, depress it fully, and turn the screw-head of the catch retainer clockwise until it stops.



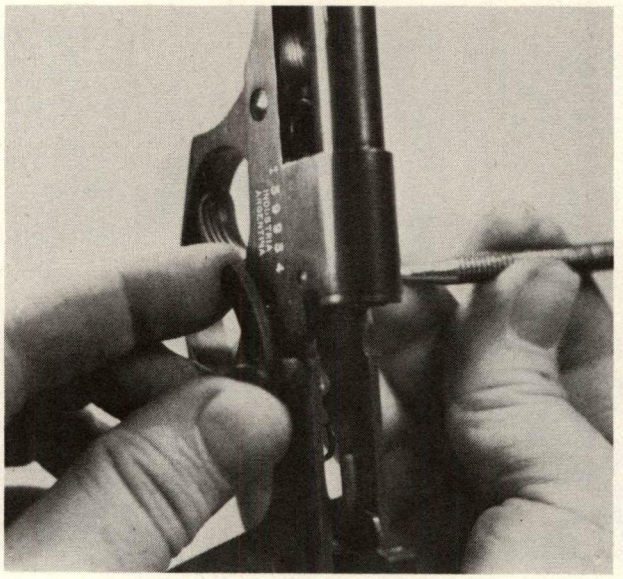
13. The magazine catch assembly is removed toward the right. Turning the catch retainer leftward will release the retainer and spring for removal. **Caution:** *The spring is under tension.*

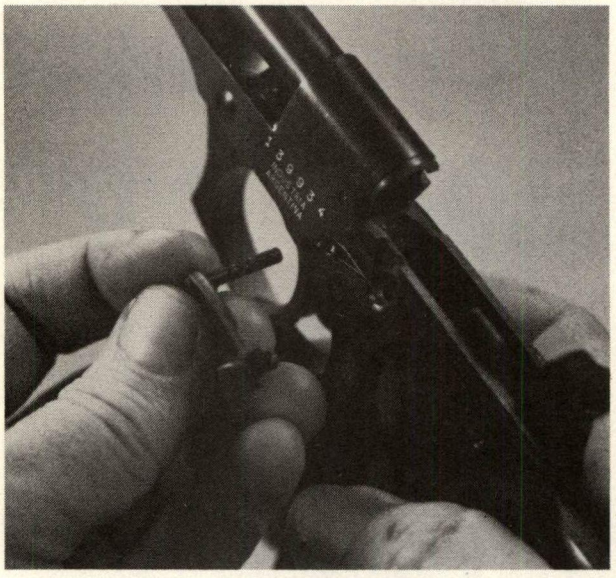


14. To remove the takedown-latch system, insert a tool between the latch stop piece and the barrel and depress the stop piece. This will allow the latch lever to be taken off toward the right. The stop piece and its spring cannot be taken out until the barrel is removed.

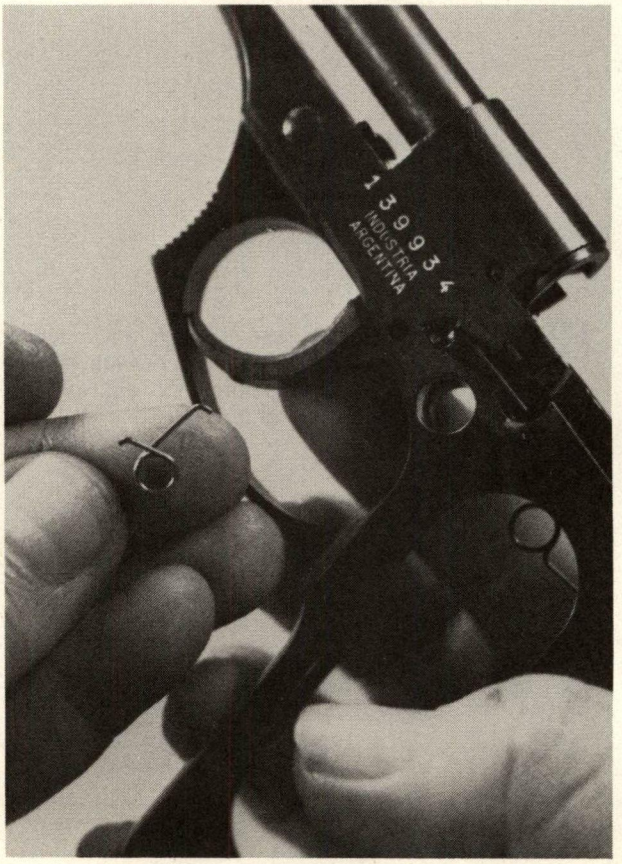


15. The cross-shaft of the slide-latch is also the pivot and retainer for the trigger. With a tool of the proper diameter, push the shaft toward the left until the slide-latch can be grasped.



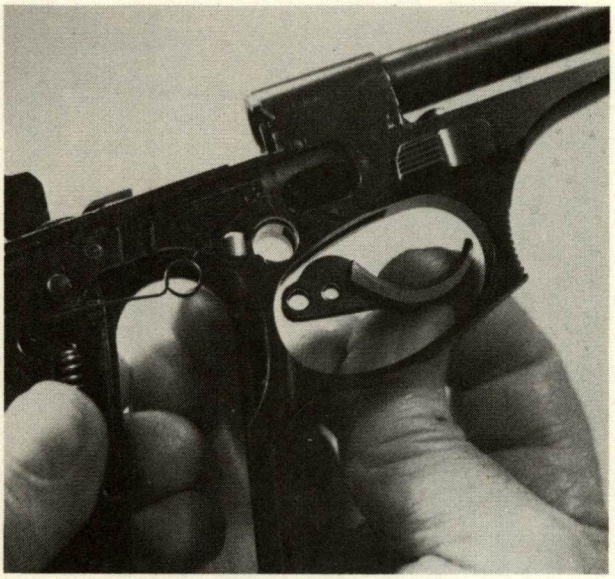


16. Remove the slide latch toward the left.

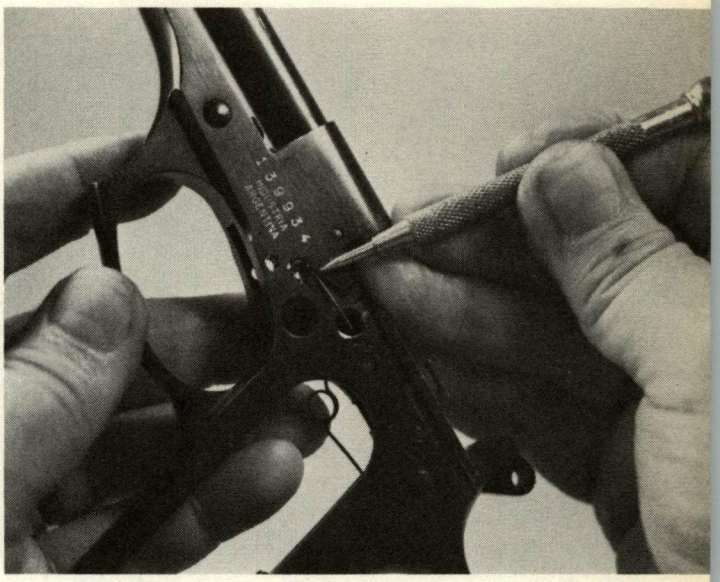


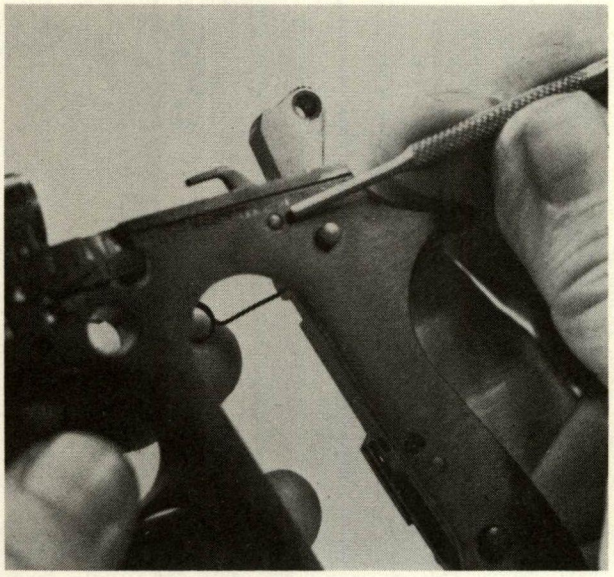
17. Removal of the slide-latch will release the trigger spring to fall out the magazine well. Take care that the spring isn't overlooked and lost.

18. Turn the trigger inside the guard to the position shown, and remove it toward either side.

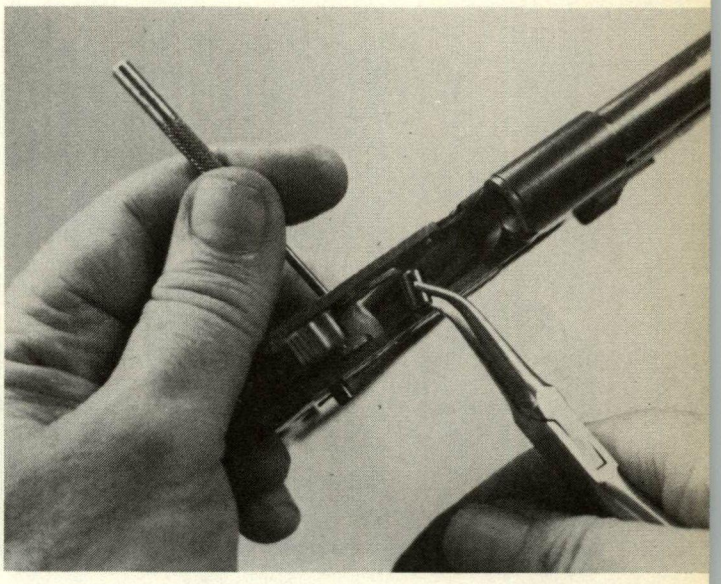


19. The slide-latch spring is staked in place, and it is best to leave it installed unless replacement is necessary.



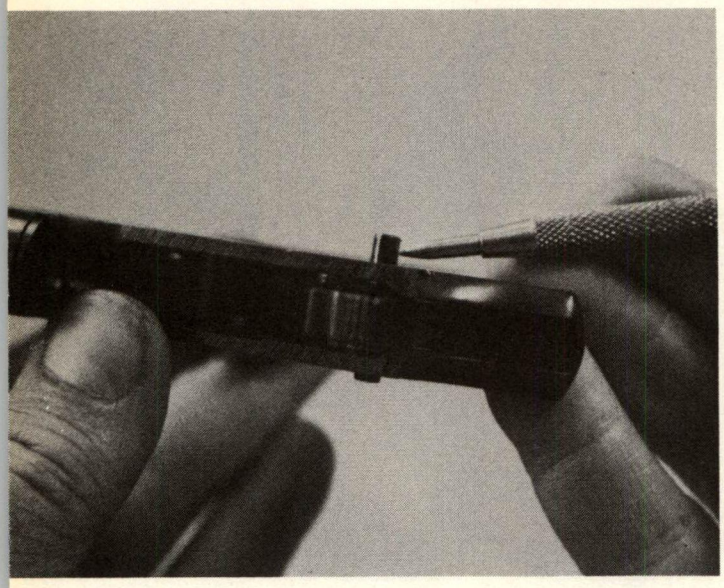


20. Drift out the ejector stabilizer pin toward the right.

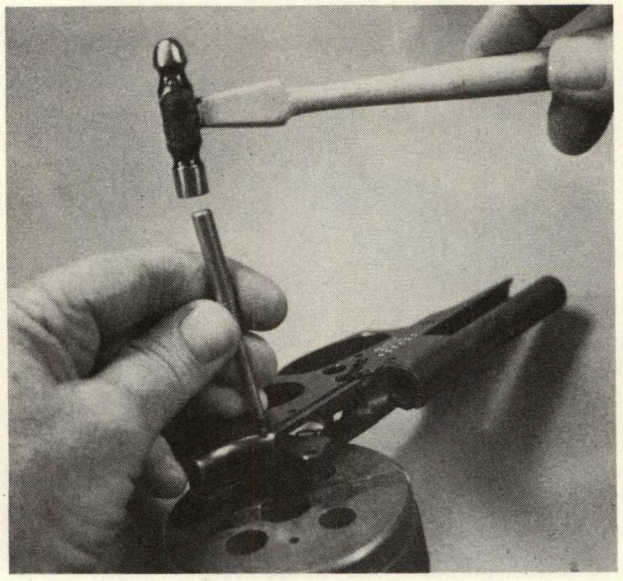


21. Note that when this pin is removed, it will release a cylindrical bushing or spacer that fits between the ejector and the sear trip lever. Take care that this small part isn't lost.

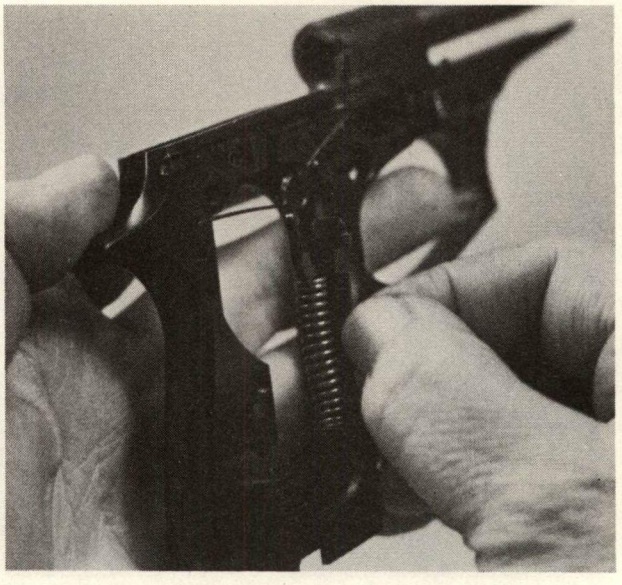
22. Before drifting out the hammer pivot, note that it protrudes from the frame more on the right side than on the left, and must be re-installed in that mode.



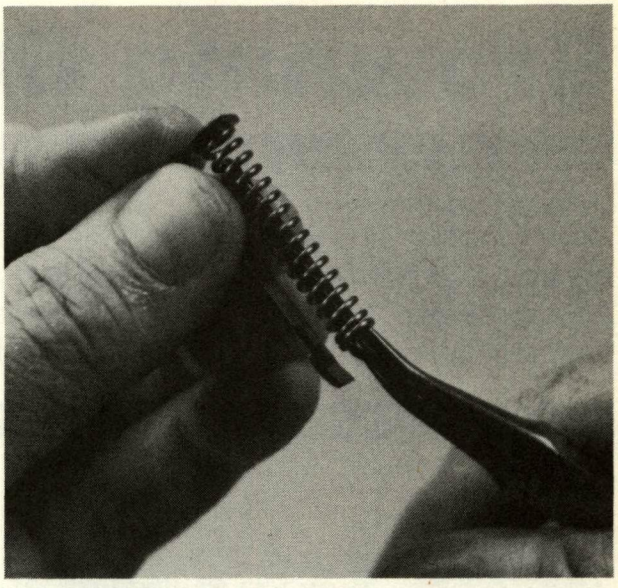
23. Drifting out the hammer pivot, it is best to support the frame on a machinist's block, as shown, or on a slightly opened bench vise.



24. Removal of the hammer pivot will release the hammer, ejector, and sear trip lever. All these can be taken out upward.



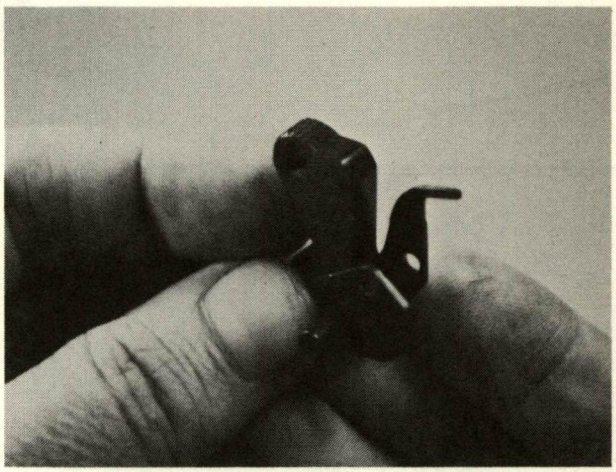
25. The sear and hammer spring assembly can now be removed forward into the magazine well and taken out toward either side.



26. Depressing the hammer spring guide slightly and turning it sideways will allow the guide and spring to be separated from the sear. **Caution:** *The spring is under tension, so control it.*

Reassembly Tips:

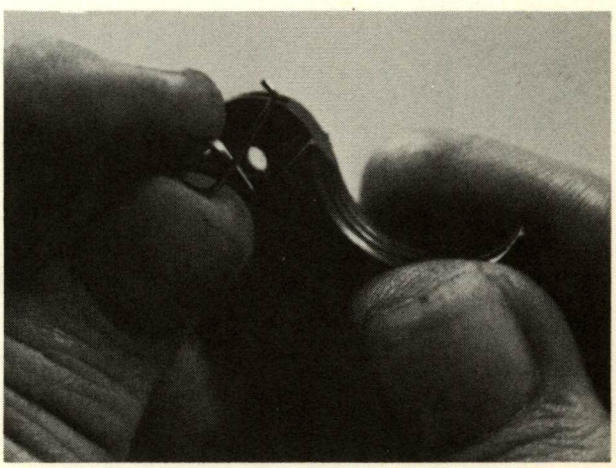
When putting the sear and hammer spring assembly back together, grip the top of the spring guide (inverted) in a bench vise, and push the sear down on it. Or, even better, grip the top of the guide with smooth-jawed Vise-Grip pliers, rest the bottom of the sear on top of a slightly-opened vise, and push down and turn.



1. The hammer, ejector, and sear trip lever are shown here assembled on the hammer pivot, in the positions they occupy in the frame.

Start the hammer pivot from the left, and install the ejector, then the hammer, then the sear trip, pushing the pin through in stages. Remember that the pin must protrude more on the right side of the frame. Use the grip panels as gauges for this.

When replacing the ejector stabilizer pin, use the same by-stages insertion. Remember to replace the spacer cylinder on the pin between the ejector and sear trip.



2. When installing the trigger and trigger spring, be sure the longer arm of the spring is toward the front of the trigger, as shown. A slave pin will be necessary to hold the spring in the trigger during reassembly.

As the slide-latch is moved into place, be sure the tip of the slide-latch spring goes on top of the inner lug of the latch.

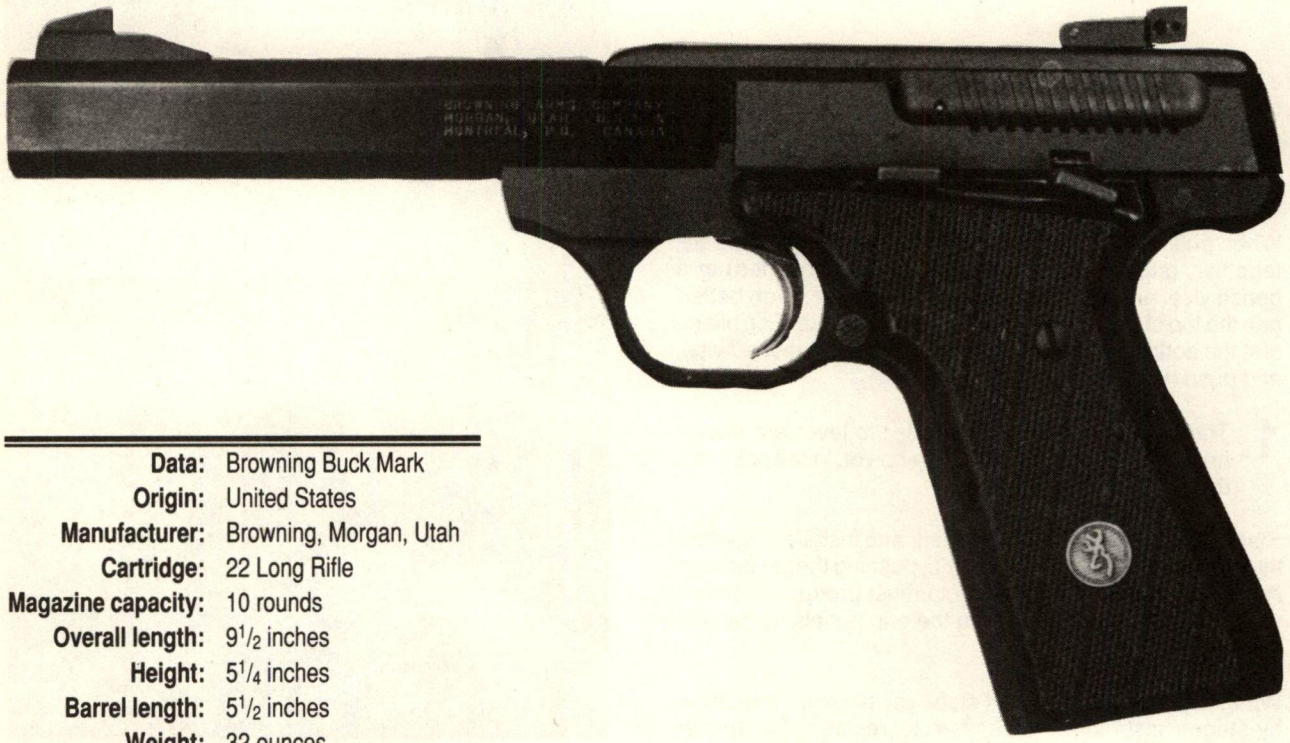
When replacing the trigger bar, be sure the tip of its spring is hooked into the notch in the lower rear end of the bar. Depress the magazine safety upward as the trigger bar is installed, to insure that the upper hook of the safety engages with its shelf on the inside of the trigger bar.

Browning Buck Mark

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Browning Buck Mark also apply to the following guns.

Browning Buck Mark Plus
Browning Nomad
Browning Challenger III
Browning Buck Mark Varmint
Browning Challenger
Browning Medalist
Browning Buck Mark Silhouette
Browning Challenger II

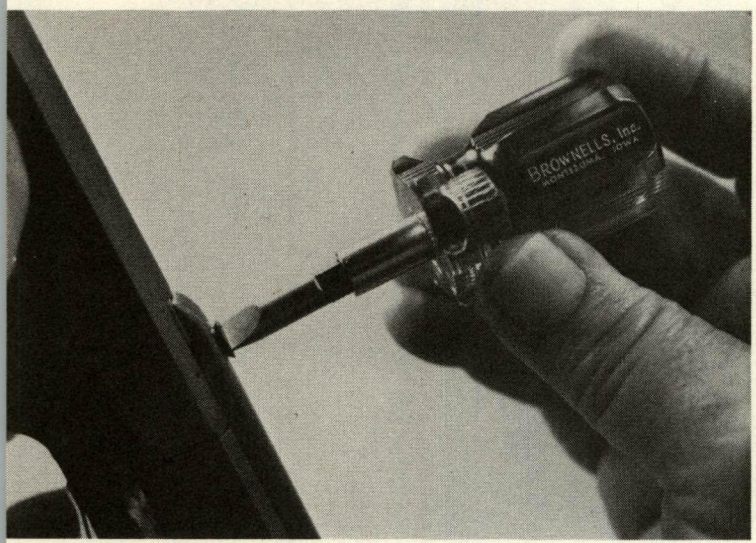


Data:	Browning Buck Mark
Origin:	United States
Manufacturer:	Browning, Morgan, Utah
Cartridge:	22 Long Rifle
Magazine capacity:	10 rounds
Overall length:	9 1/2 inches
Height:	5 1/4 inches
Barrel length:	5 1/2 inches
Weight:	32 ounces

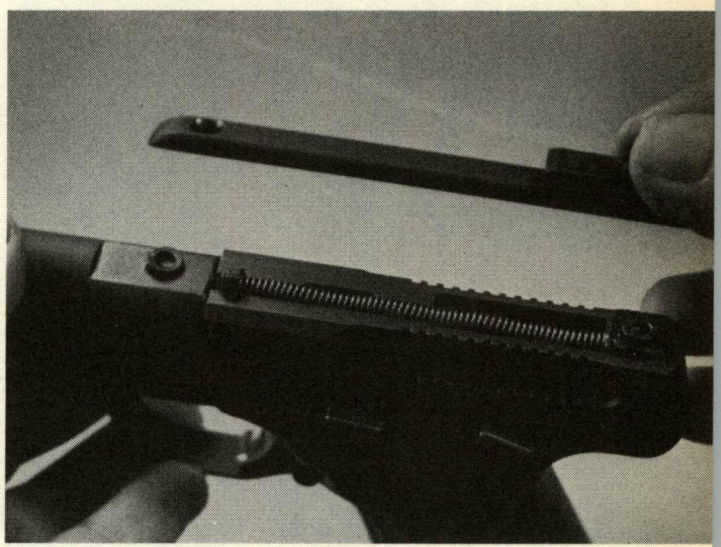
Introduced in 1985, the Buck Mark replaced the earlier Belgian-made Browning 22 pistols, the Nomad, Challenger, and Medalist. Technically, there were few changes, and the instructions can generally be used for these as well. The Buck Mark is also offered in Silhouette, Varmint, and Buck Mark Plus versions. On the Varmint and Silhouette, initial takedown requires removal of the top rear screw and the barrel retaining screw. Otherwise, there are no differences that affect takedown and reassembly.

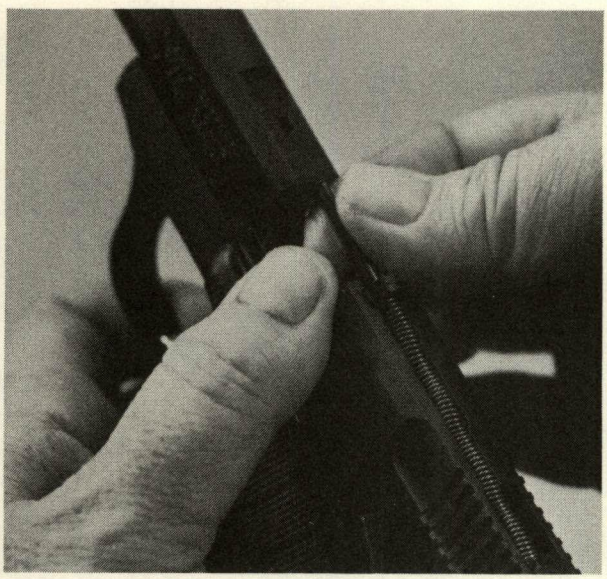
Field Strip:

1. Field-stripping of the Buck Mark requires removal of external screws, so be sure the screwdriver blades used fit the slots perfectly, to avoid any marring. Remove the large screws at the front and rear of the sight base. Inside the base, the screws are secured by lock washers, and both may be very tight. Take care to prevent slipping of the screwdriver.



2. After removal of the screws, lift off the sight base. Take care that the two lock washers are not lost.

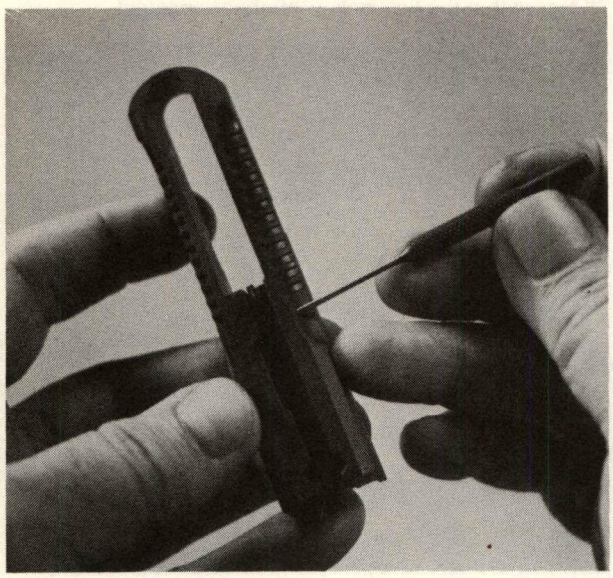




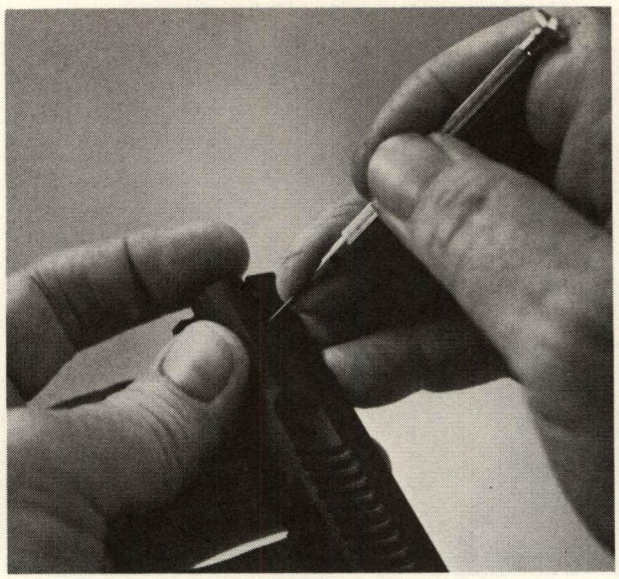
3. Retract the slide slightly and grasp the recoil spring guide at the front, lifting it upward. The spring is a captive unit on the rod. Removal of the C-clip at the rear will allow the spring and rod to be separated. **Caution:** *The spring is under tension, so control it.*

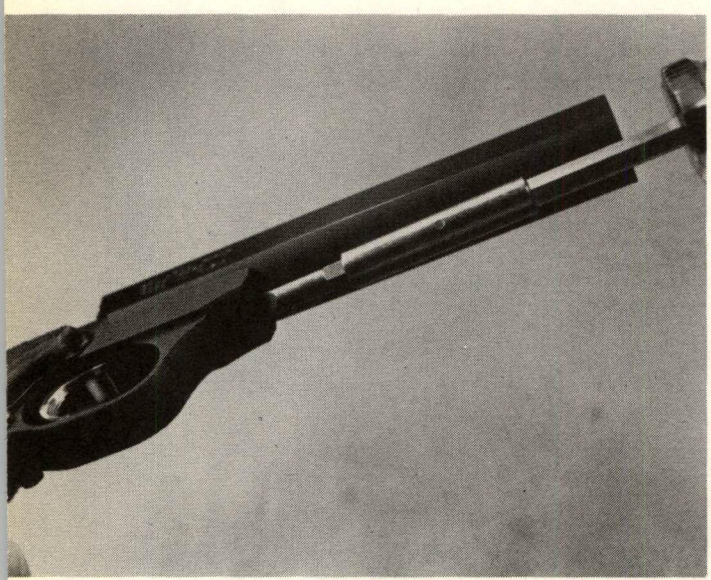
4. Lift the slide off the top of the frame.

5. The firing pin is retained in the slide by a transverse roll pin. Use a roll pin punch to drift it out, and remove the firing pin and its spring upward.



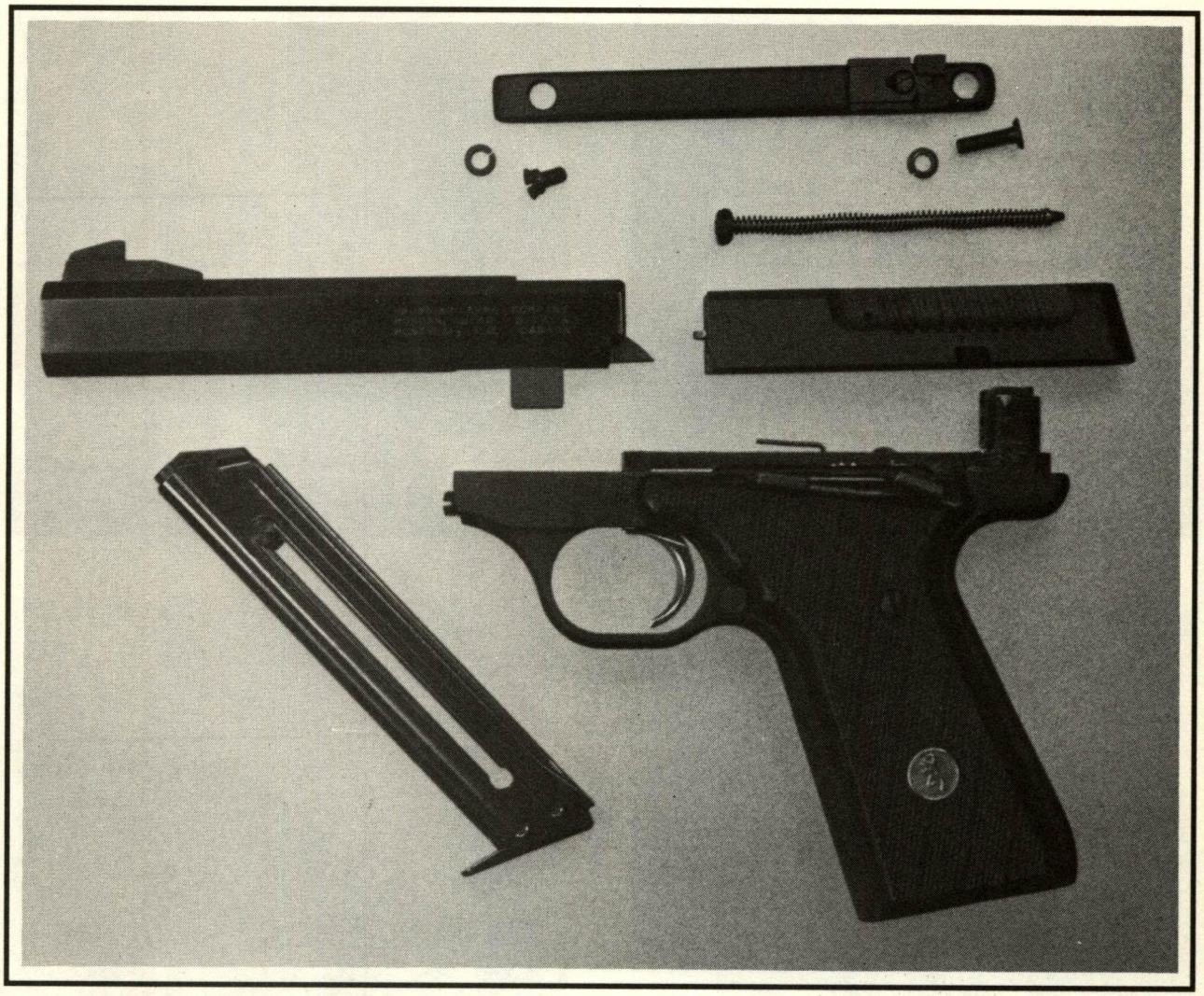
6. Use a very small screwdriver to depress the extractor plunger rearward, and tip the extractor out toward the front for removal. **Caution:** *Control the compressed plunger and spring, and ease them out toward the front for removal.*





7. The barrel is retained by a large screw at the front of the frame.

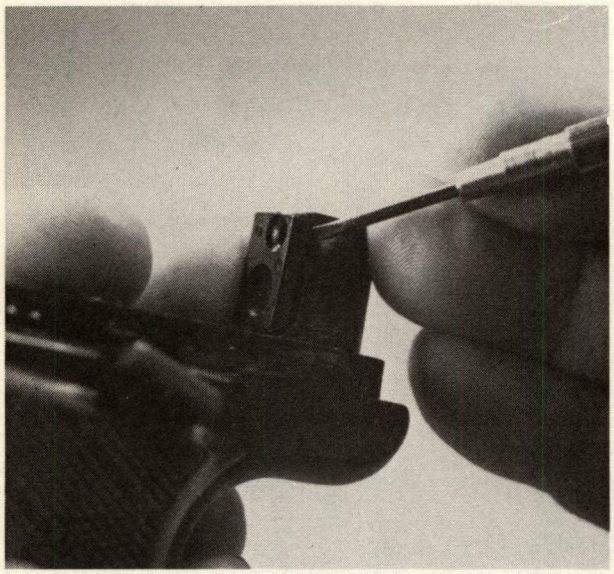
8. Backing out the screw will allow the barrel to be taken off upward. **Gun is now field-stripped.**



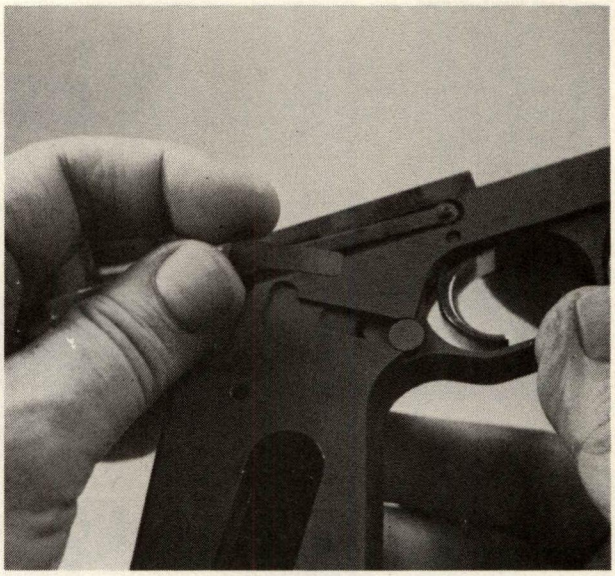
Browning Buck Mark, field-stripped

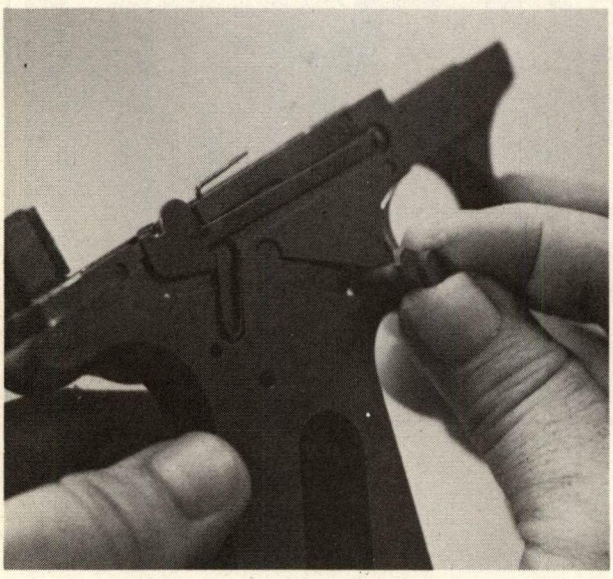
Detail Strip:

9. The slide buffer will probably remain on the frame post when the slide is removed. It can be gently pried away from the post with a sharp tool.



10. The factory instruction booklet contains a caution about removing the grips, noting that they contain and position certain parts. For the non-gunsmith, this is good advice. In complete takedown, the grip panels should be removed one at a time. Take the right grip off first, and lift off the magazine catch spring.

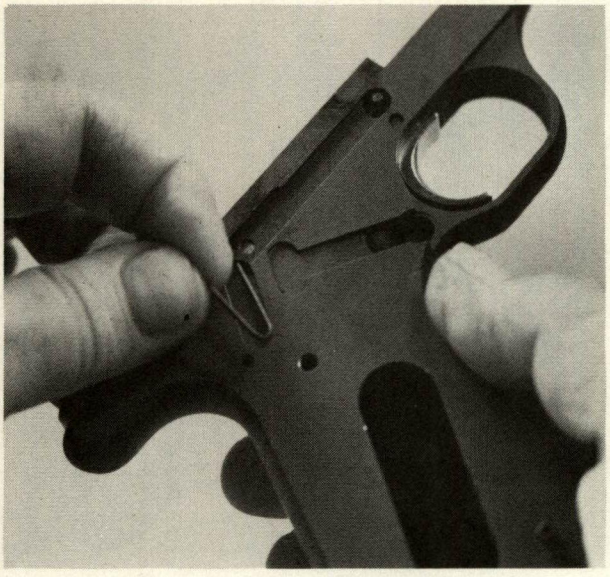


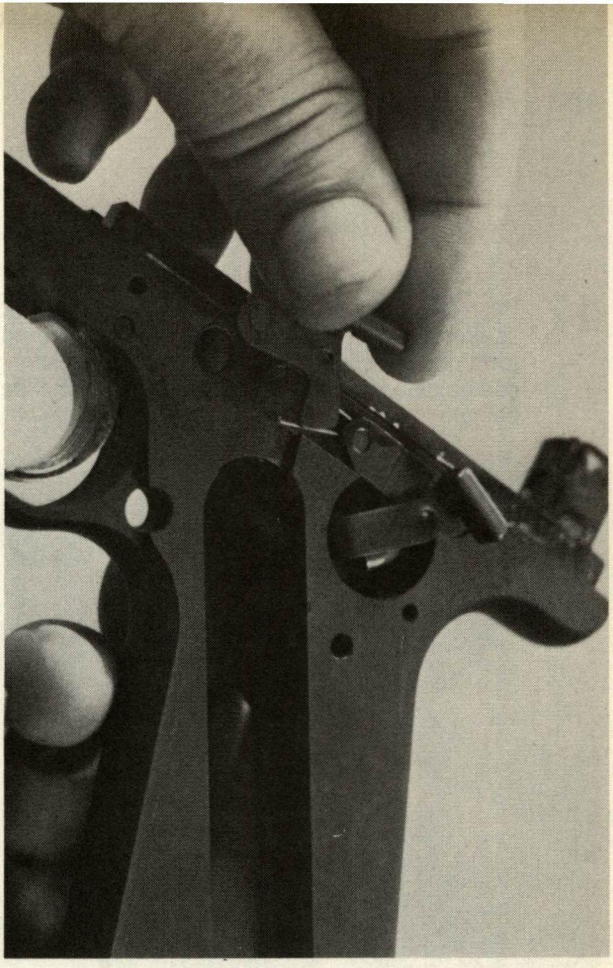


11. Remove the magazine catch toward the right.

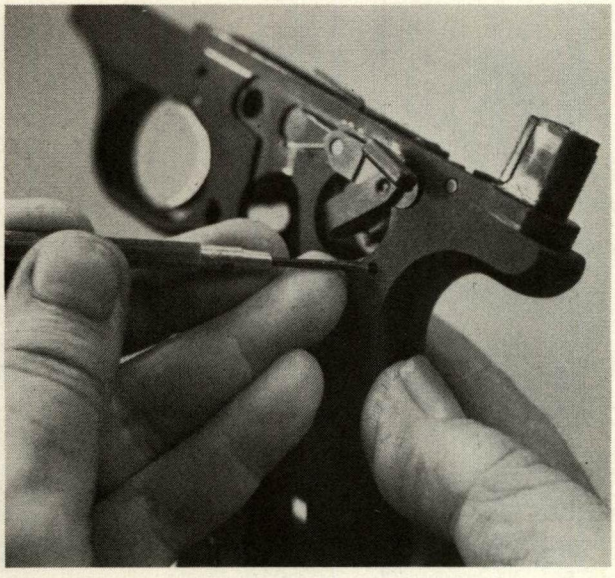
12. Remove the trigger bar toward the right.

13. Remove the trigger bar spring from its recess on the right side.

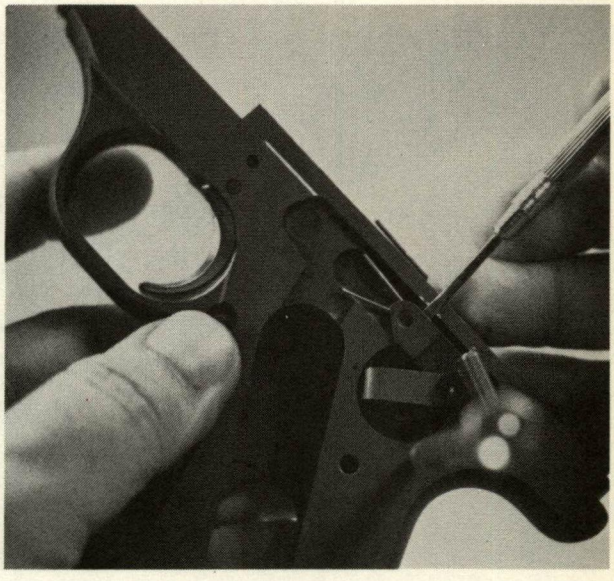




14. Remove the left grip, and lift off the slide-latch.



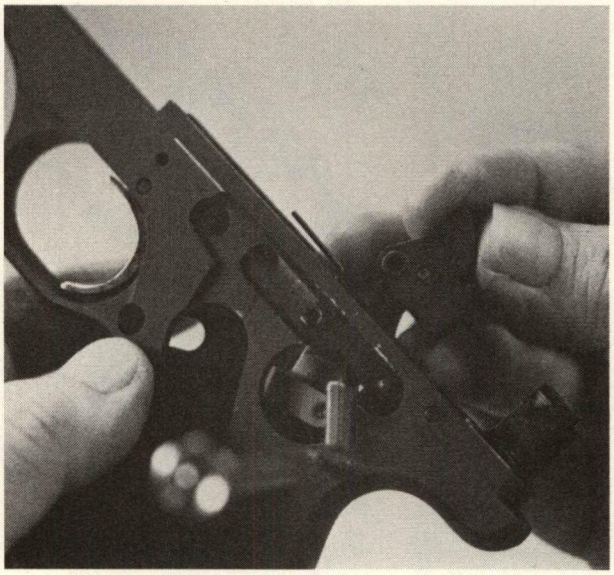
15. With the hammer in cocked position, insert a small tool such as a screwdriver or a pointed drift in the access hole near the upper curve of the frame backstrap, to catch and restrain the hammer spring plunger.

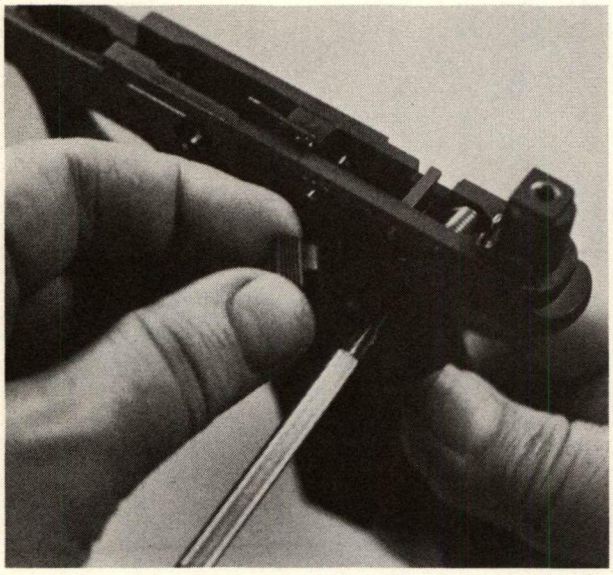


16. Gently pry the safety click plate outward, off the ends of the two pins. Remove the plate upward.

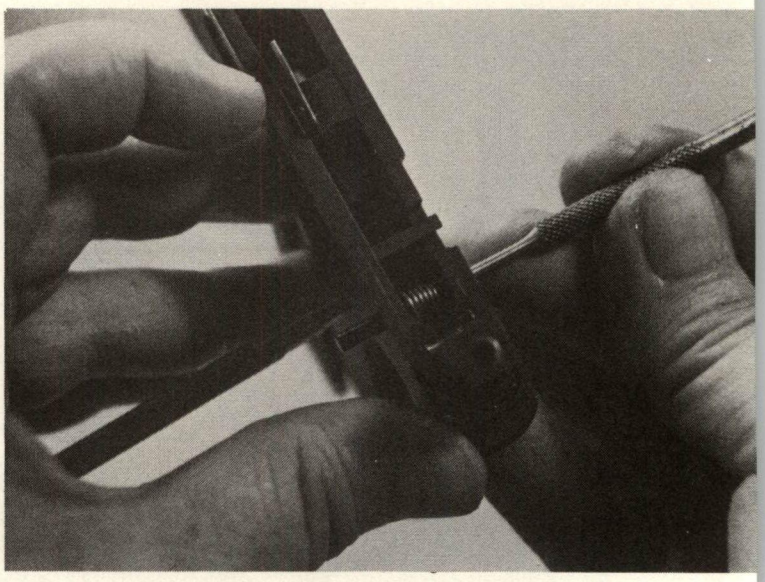
17. Push the sear forward, and turn the hammer up to its fired position. Push the hammer pivot pin out toward the left. If necessary, the slide latch spring can be detached from its groove in the end of the hammer pivot pin.

18. Remove the hammer upward. The hammer strut can be separated from the hammer by driving out the cross-pin, but in normal takedown it is best left in place.



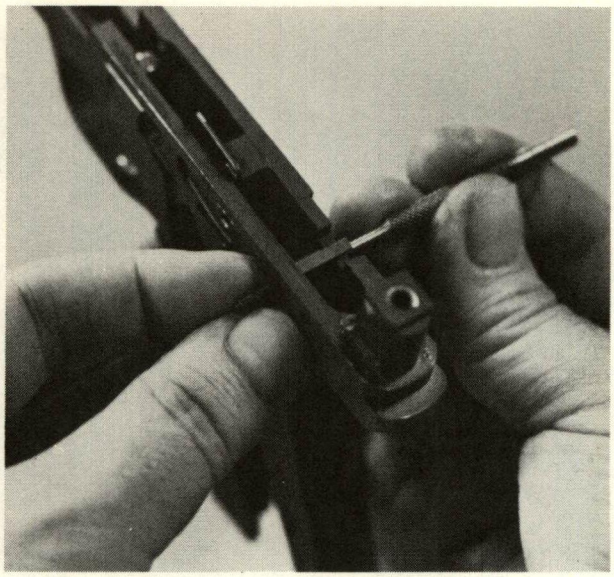


19. Tip the safety catch outward at the rear, and remove it toward the left.

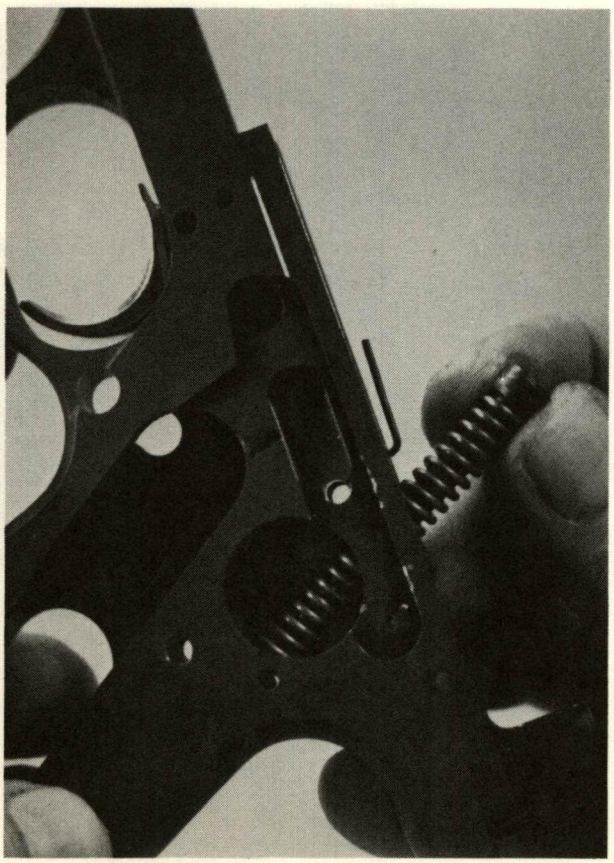


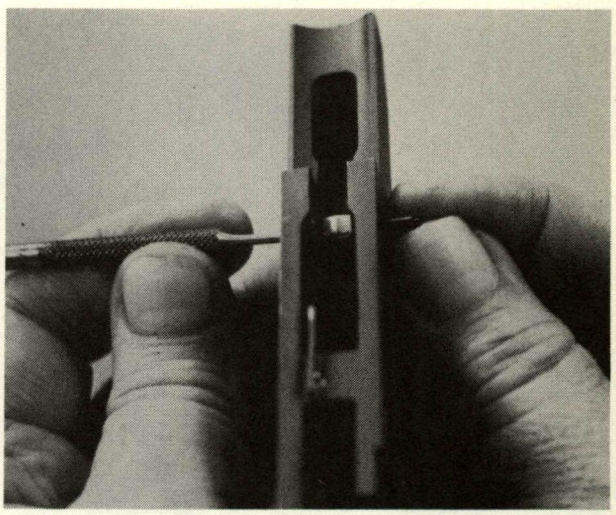
20. Push out the sear spring retaining pin toward the left. The spring will be released downward into the frame—hold a shop cloth around the frame to catch it.

21. Push the sear pivot pin out of the frame toward the left.



22. Remove the sear upward.

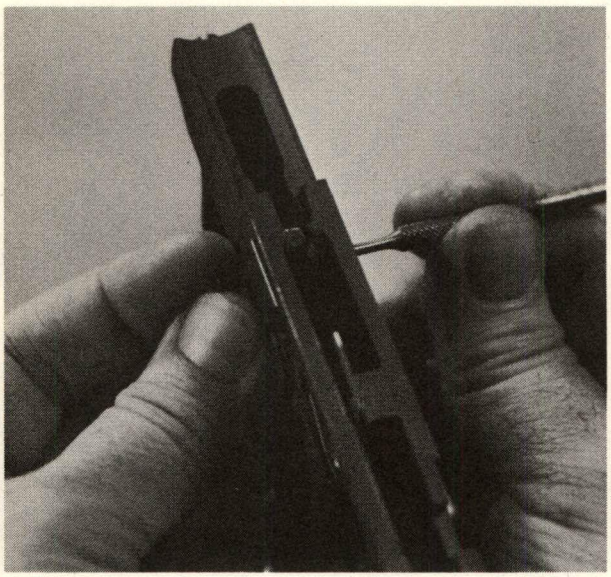




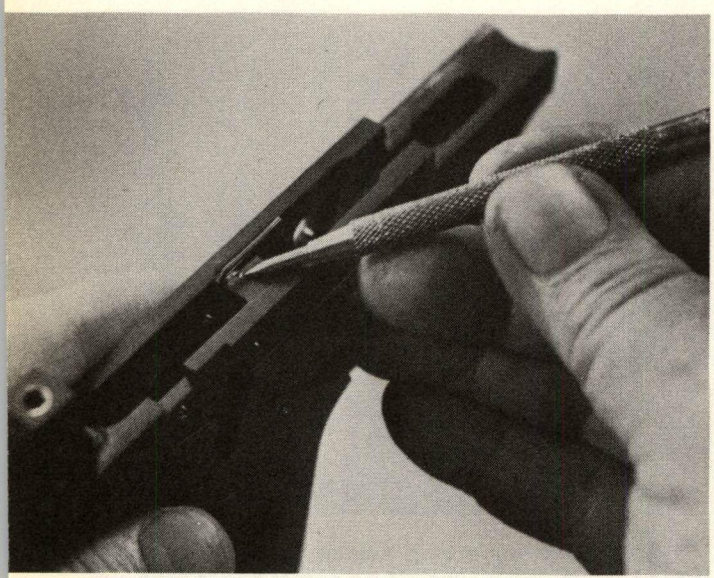
24. Through the access hole on the left side of the frame, use a punch of the proper size to drive out the trigger bar pin toward the right.

23. Hold a thick shop cloth over the top of the frame, and remove the tool (see Step 15) that is holding the hammer spring plunger in depressed mode. After the cloth has caught the expelled plunger and spring, remove them from the top of the frame. **Caution:** *This is a strong spring. Use a heavy cloth to cushion its impact.*

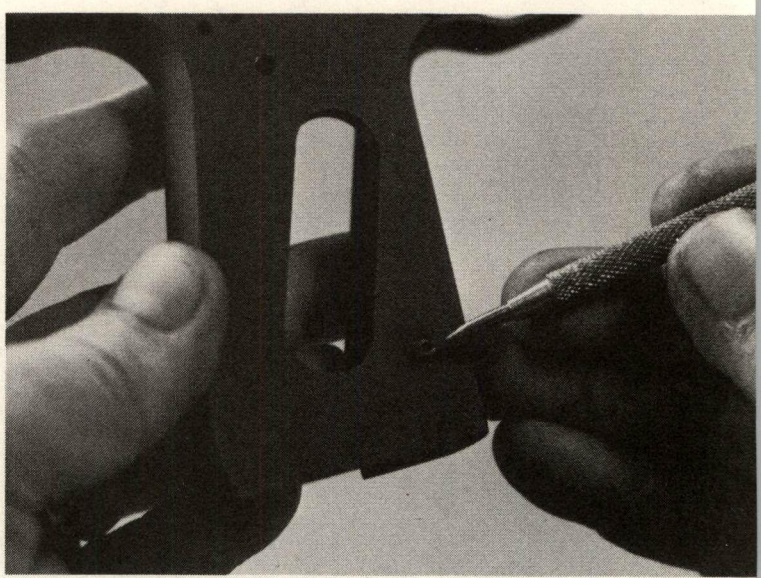
25. Drift out the trigger pin.



26. Turn the trigger to the position shown, and remove it from inside the guard.



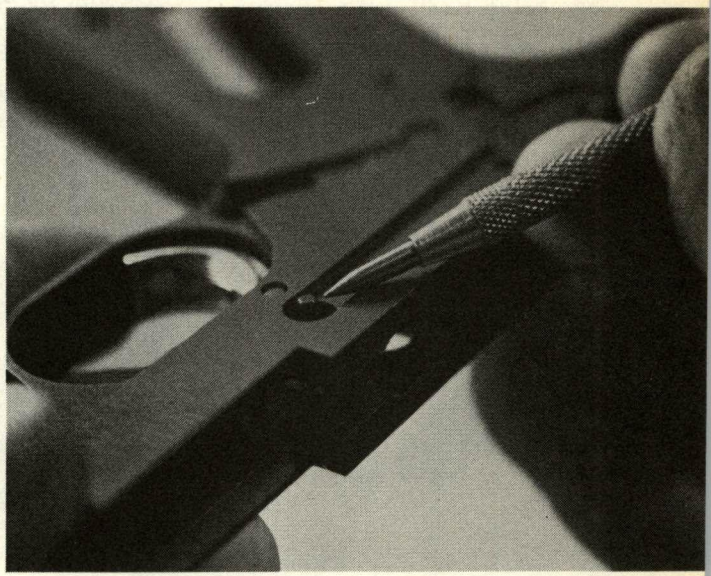
27. The ejector is staked in place on top of the frame, and unless necessary for repair, it is best left in place. If removal is necessary, it can be levered out from the top, or driven out with a slim punch from below.



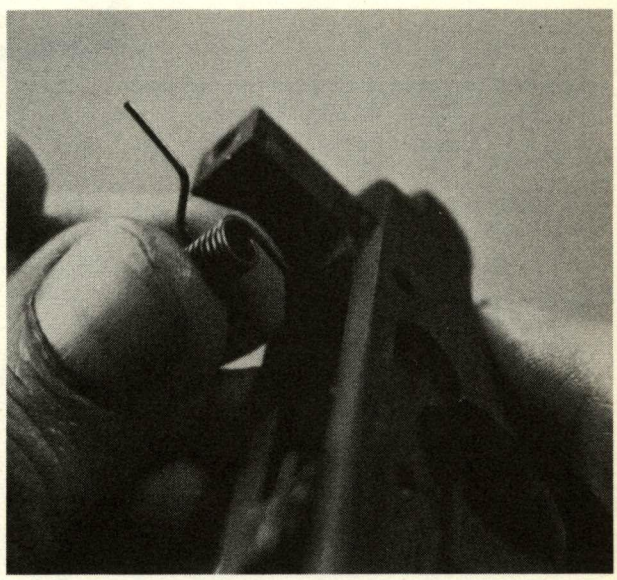
28. Drifting out the roll pin in the lower front of the grip frame will release the magazine ejector and its spring for removal downward.

Reassembly Tips

1. When replacing the trigger bar pin in the top of the trigger, note that it must protrude slightly above the level of the frame side. If driven in too far, its left tip will enter the access hole and lock the trigger.



2. When installing the sear spring, be sure it is oriented as shown, with the long arm upward and the shorter arm below.



When replacing the sear, grip its top with slim pliers, and use the notch in its lower portion to press down the arm of the spring, aligning the hole for insertion of the pin. **Caution:** *The torsion-type spring is capable of sending the sear quite a distance. Keep a good grip on it.*

When replacing the recoil spring unit, remember that the flat of the front mounting lug goes downward, and the beveled corners upward.

When replacing the sight base, remember to place the two lock washers on top of the frame and barrel before the base is set in place. Note that the short screw goes at the front, the long one at the rear.

Browning BDA 45

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Browning BDA 45 also apply to the following guns.

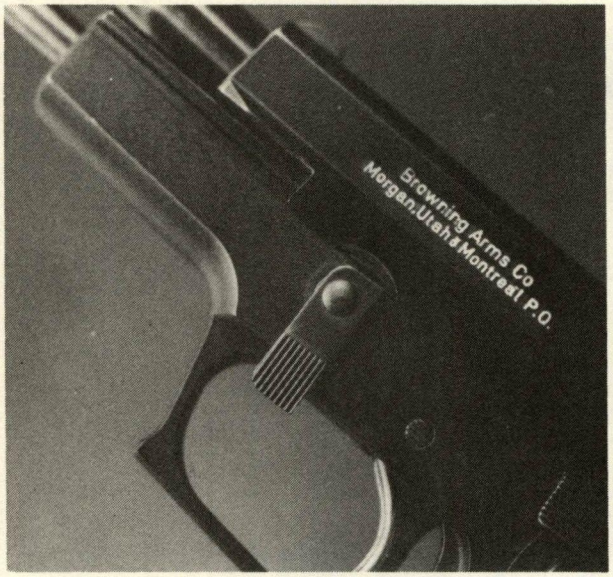
SIG/Sauer P220 **SIG/Sauer P225** **SIG/Sauer P226**
SIG/Sauer P228

Data:	Browning BDA 45
Origin:	Belgium and West Germany
Manufacturer:	J. P. Sauer & Sohn, Eckernforde
Cartridge:	45 ACP
Magazine capacity:	7 rounds
Overall length:	$7^{13}/_{16}$ inches
Height:	$5^{1}/_{2}$ inches
Barrel length:	$4^{3}/_{8}$ inches
Weight:	29 ounces

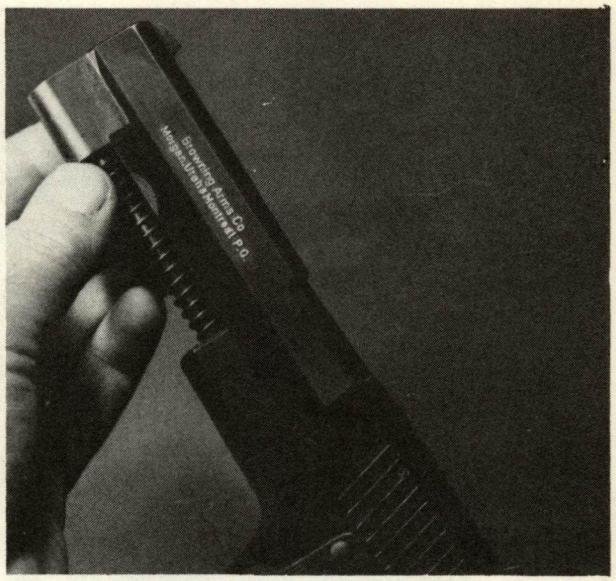
This is the SIG/Sauer P220, imported briefly a few years ago under the Browning name. In current importation by SIGarms, the P220 is offered in 45 ACP, 38 Super, and 9mm Luger. There is also an alternate version with a U.S.-style push-button magazine release. All of these have the same basic mechanism, and the instructions will apply.

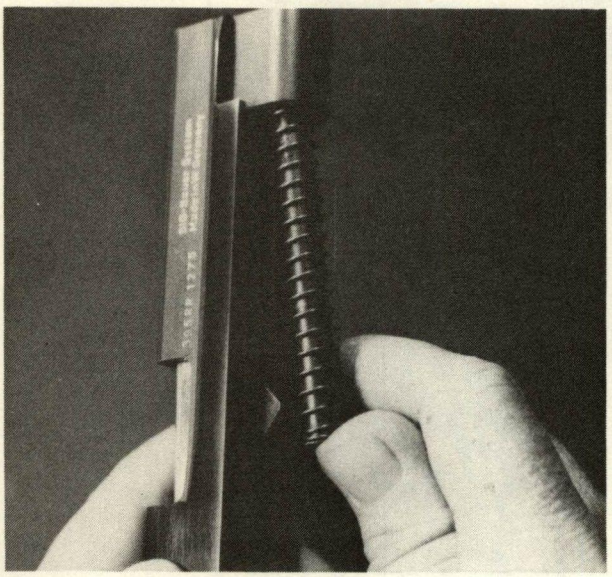
Field Strip:

1. With the magazine in place, draw the slide to the rear until it locks open, then remove the magazine. The takedown-latch is located on the left side of the frame, just forward of the trigger. Turn the latch straight down.

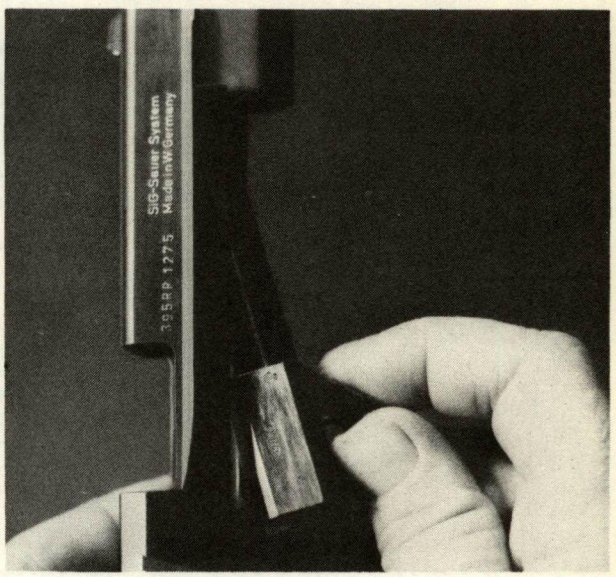


2. Holding the slide against the tension of the recoil spring, release the slide-latch and run the slide assembly forward off the frame.





3. Lift the recoil spring guide from its step on the underlug of the barrel and remove the guide and spring to the rear.

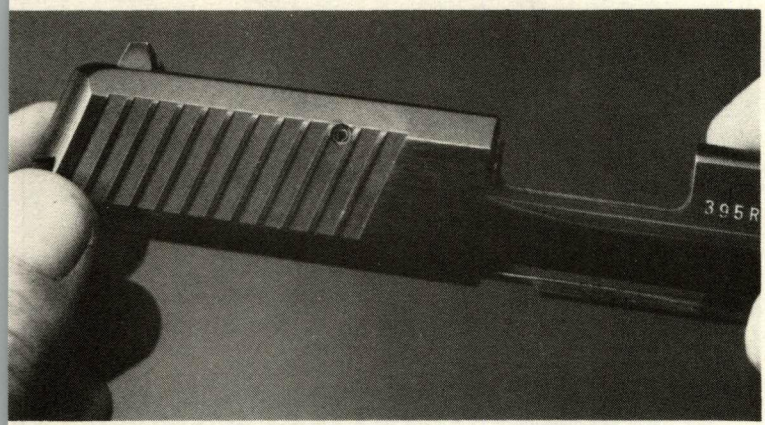


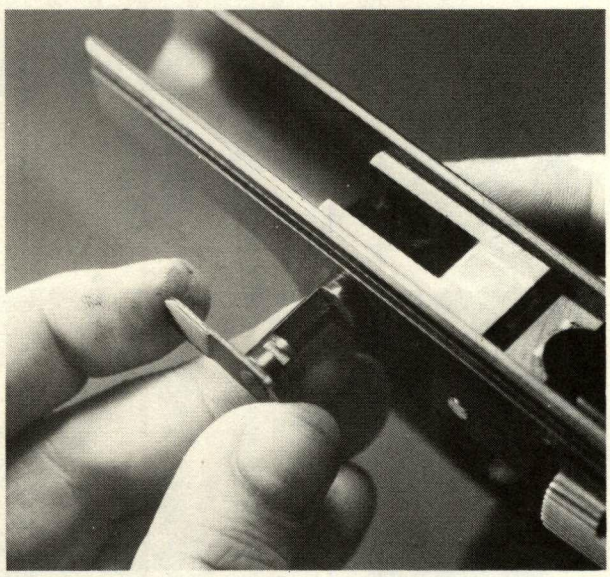
4. Move the barrel slightly forward to clear the extractor, then pull it down and out of the slide. **Gun is now field-stripped.**

Browning BDA 45 field-stripped

Detail Strip:

5. A large roll pin crosses the slide to retain the breechblock. After the pin is drifted out, the breechblock is removed downward, and the extractor, firing pin, firing pin block, and their attendant springs are easily detached. If the breechblock is very tight in the slide, it can be pried gently downward by inserting a tool above it at the rear of the slide.

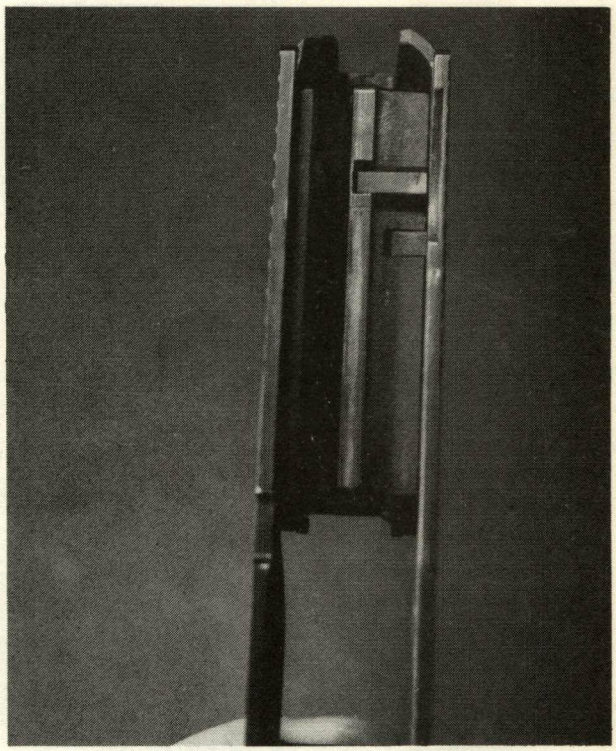


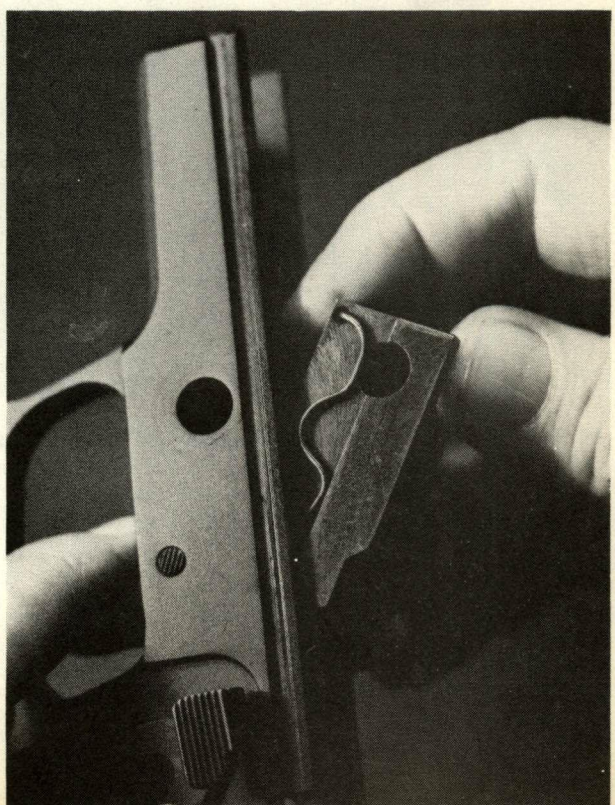


7. The takedown-latch is turned to point forward and moved out to the left.

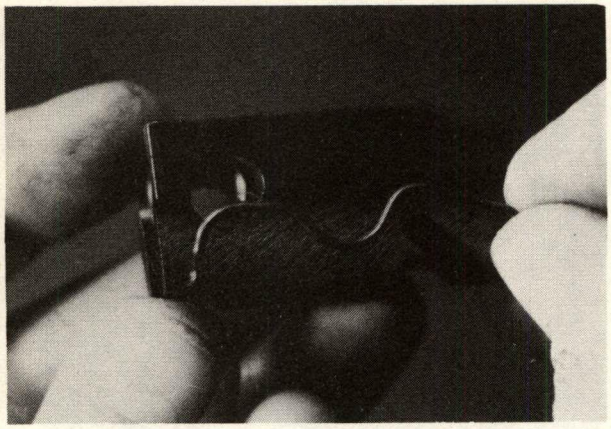
8. Removal of the takedown-latch will release the locking block insert which is removed forward and up. The combination takedown-latch and slide-latch spring will come out with the block.

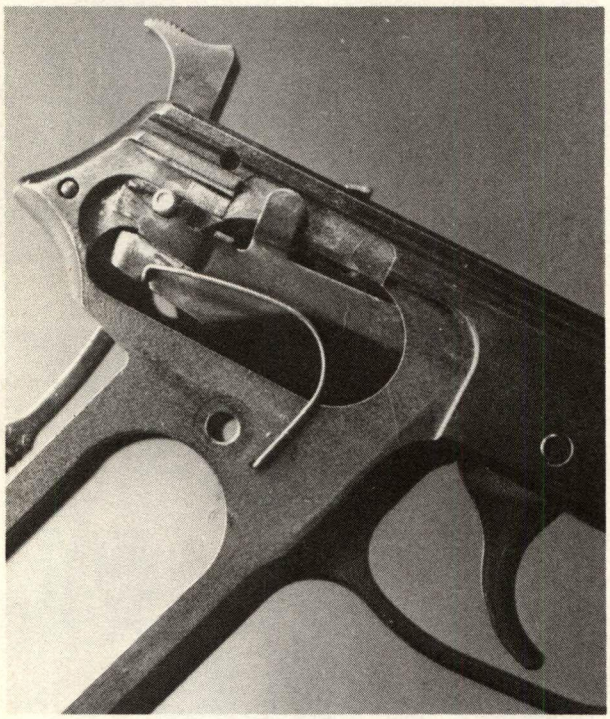
6. This view of the underside of the slide shows the breechblock in place. The longer bar extending across from the right side is the firing pin block; the shorter bar is the base of the extractor.





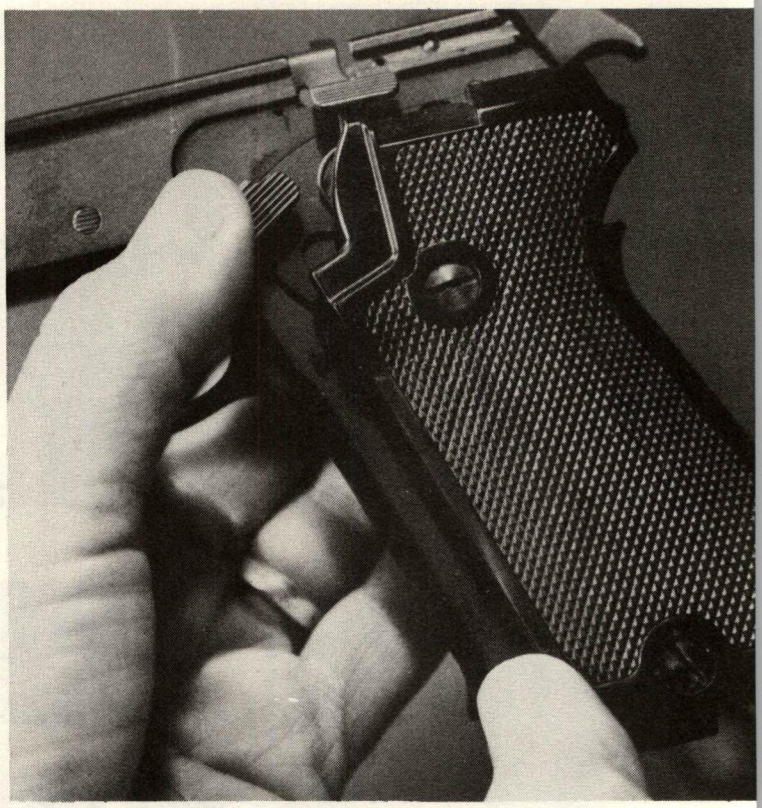
9. The spring is easily detached from the side of the block.

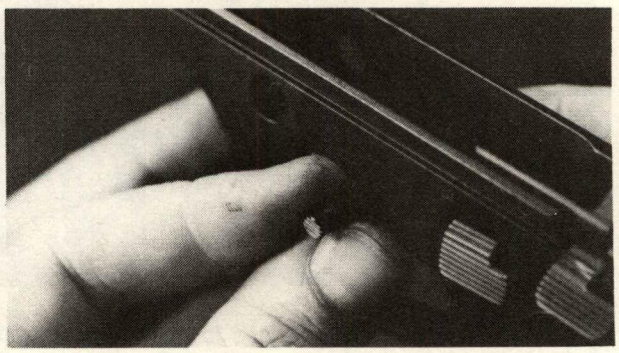




11. The combination trigger and trigger bar spring is shown in place on the right side of the frame. After the rear tip of the spring is flexed downward and detached from the bar, the spring is easily lifted off toward the right.

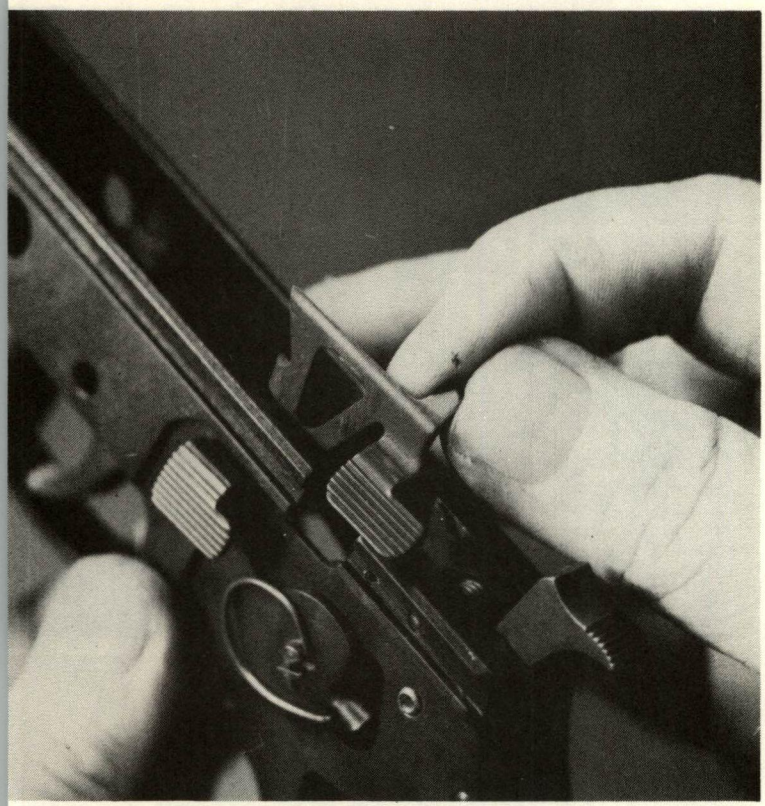
10. After both grip screws are backed out, partially depress the hammer-drop lever and move the left grip panel down and toward the rear for removal. The lanyard loop is held in place by the left grip, and is easily removed.



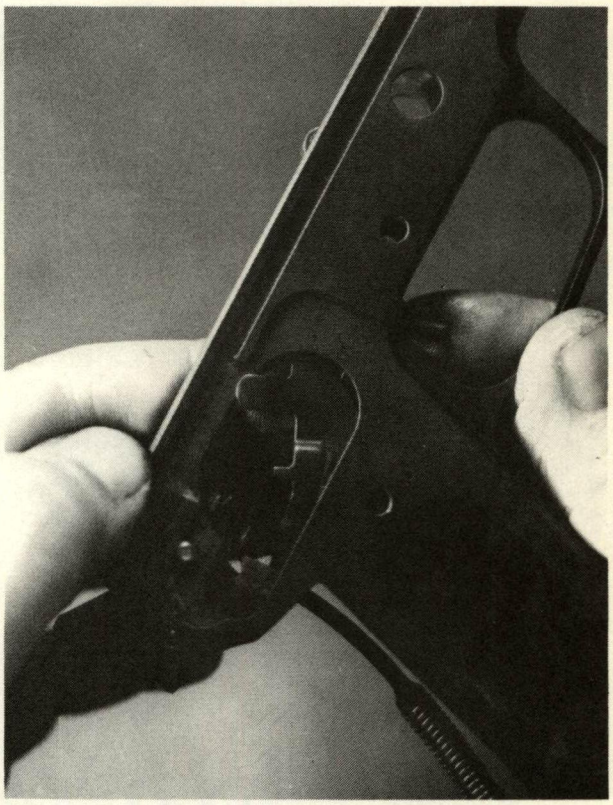


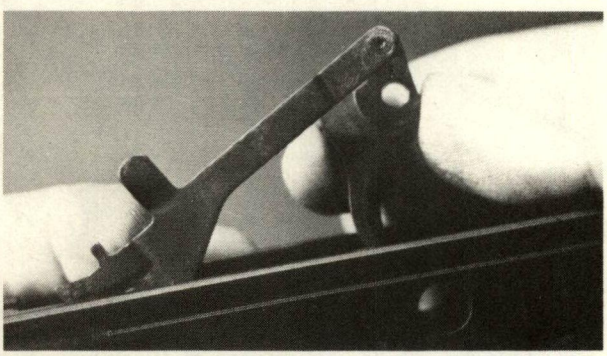
12. Push out the trigger pivot toward the left side and remove it from the frame.

13. The trigger pivot also retains the slide latch, and it can now be removed from the top of the frame.

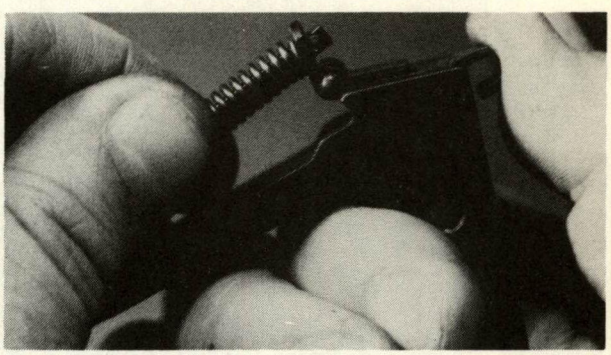


14. Push the trigger and trigger bar up and forward. When the trigger has moved far enough to allow lateral movement of the trigger bar, move it inward through the frame opening.



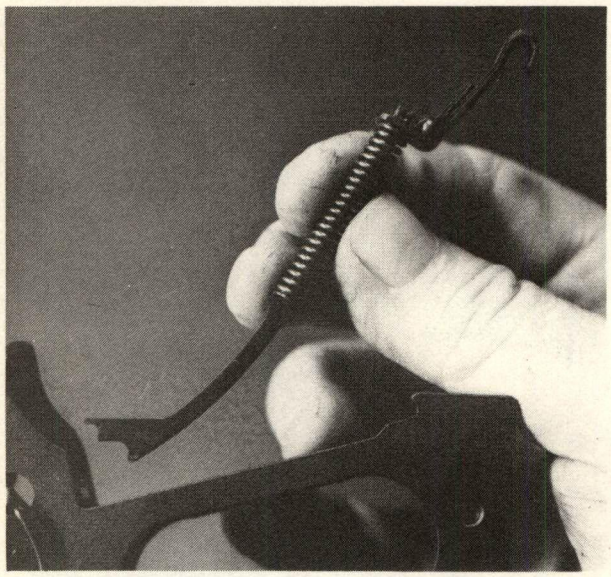


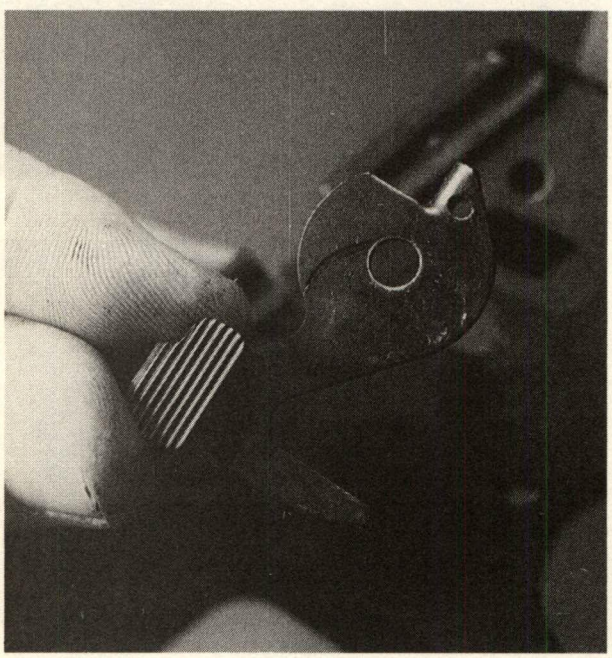
15. Remove the trigger and trigger bar from the top of the frame. These two parts are easily separated after removal.



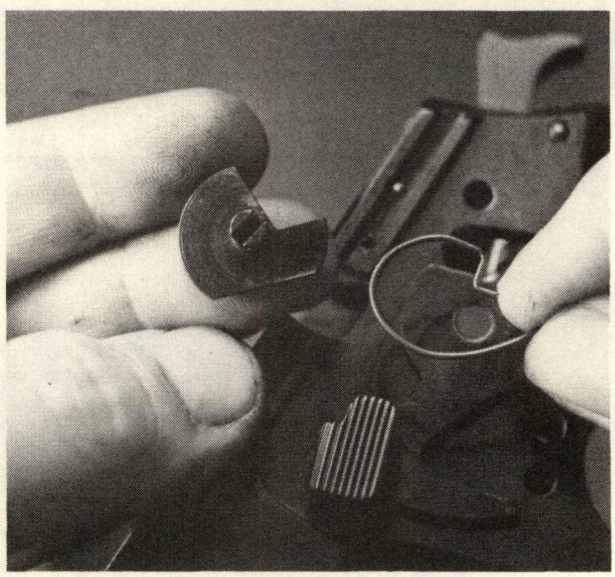
16. With the hammer at rest, push up on the magazine catch until its cross-pin clears the retaining wings at the lower rear of the grip frame.

17. Remove the magazine catch, mainspring, and hammer strut from the rear of the frame. Note that there is a keeper pin which captures the mainspring on the strut. Remove it with great care, as the spring is compressed.





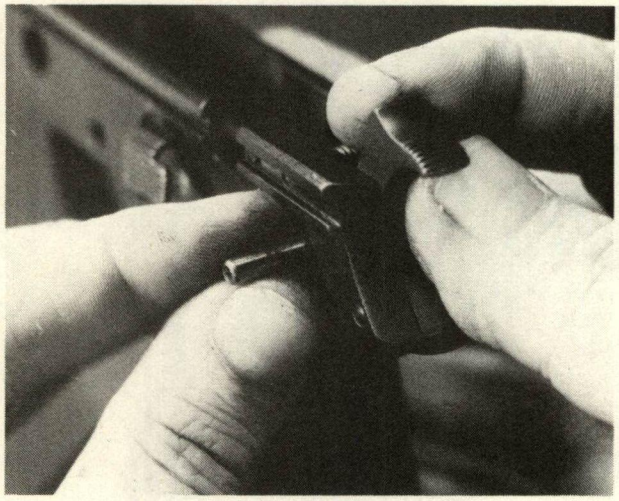
18. The hammer-drop lever and its spring are shown in place on the left side of the frame.

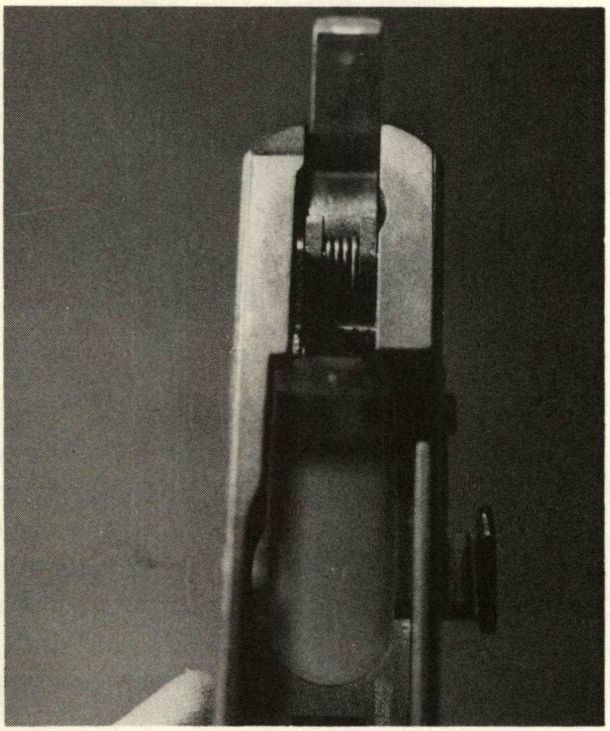


19. Move the rear tip of the spring slightly upward and unhook it from the hole in the lever. Move the rear tip of the spring down and forward, and it can be easily detached from the lever stud at the center. The lever can now be lifted off toward the left.

20. The lever stud and its retaining plate (this is a single part) will be released to fall or be pushed inward, to be removed from within the frame.

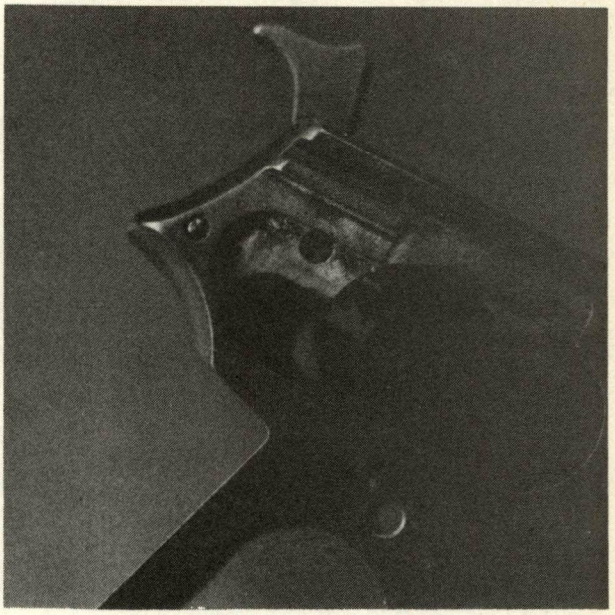
21. Pushing out the hammer pivot will release the hammer for removal from the top of the frame.





22. The upper arm of the sear spring, accessible from the top of the frame, can be flexed toward the right side to clear its compression pin, relieving the tension. The sear pin at the top of the frame can then be pushed out to free the sear and the firing pin block lever for removal from the top.

23. The small pin at the extreme upper rear of the frame retains only a filler piece, and removal is not necessary.



Reassembly Tips:

When replacing the stud plate that retains the hammer-drop lever, use a fingertip to hold it inside the frame with its arm toward the rear while installing the lever and spring.

Replacing the trigger and trigger bar in the frame will require some precise maneuvering, but use no force.

When replacing the locking block insert in the frame, the trigger pin must be oriented so the twin cuts in the pin will enter the angled tracks on the block. The left end of the pin has serrations to aid in turning it while it is in place. The cuts in the pin should be at the front and angled forward. Also, be sure the slide latch is pushed to the left, against the inside of the frame, when inserting the locking block insert.

When replacing the takedown-lever, first be sure the insert block is all the way to the rear with its cross-holes aligned with the holes in the frame. Turn the lever straight up for initial insertion, then turn it down to point forward, and push it in. Remember to turn it back down to takedown position before replacing the slide on the frame.

When replacing the breechblock in the slide, use a slave pin to hold the firing pin in place until the cross-pin is driven through.

Browning BDA 380

Data:	Browning BDA 380
Origin:	Italy
Manufacturer:	Armi Beretta, S.p.A., Gardone (Brescia) for Browning Arms Co. Morgan, Utah
Cartridge:	380 ACP
Magazine capacity:	13 rounds
Overall length:	$6^{3}/_{4}$ inches
Height:	$4^{3}/_{4}$ inches
Barrel length:	$3^{13}/_{16}$ inches
Weight:	23 ounces

Made for Browning by Beretta of Italy, the BDA 380 is essentially a restyled version of the Beretta Model 84, but the changes are extensive enough to give it mechanical features that are entirely different. This is particularly true of the safety and firing pin system, as the BDA has a slide-mounted safety with ambidextrous levers. A hammer-drop system is included in this system, and this also changes the frame components.

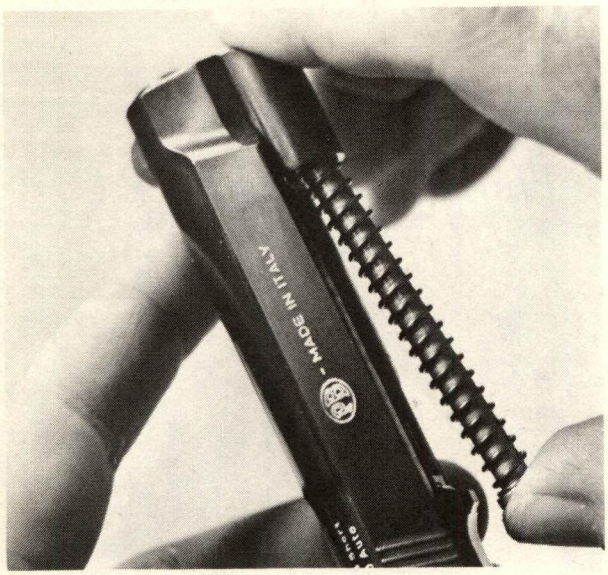
Field Strip:

1. Remove the magazine, and depress and hold the takedown-latch lock button, located on the left side of the frame.

2. Turn the takedown-latch lever on the right side of the frame down to the vertical position.

3. Move the slide and barrel assembly forward off the frame.

4. Controlling the tension of the recoil spring, lift the rear of the spring guide away from the barrel, and remove the spring and guide toward the rear.

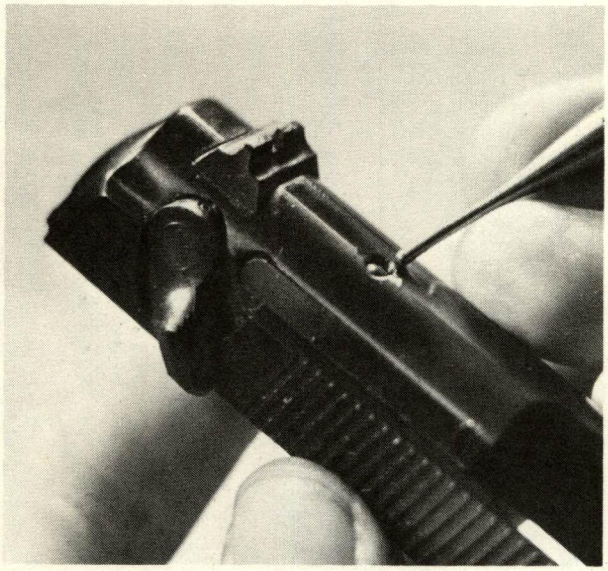


5. Move the barrel slightly forward, then remove it downward and toward the rear. **Gun is now field-stripped.**

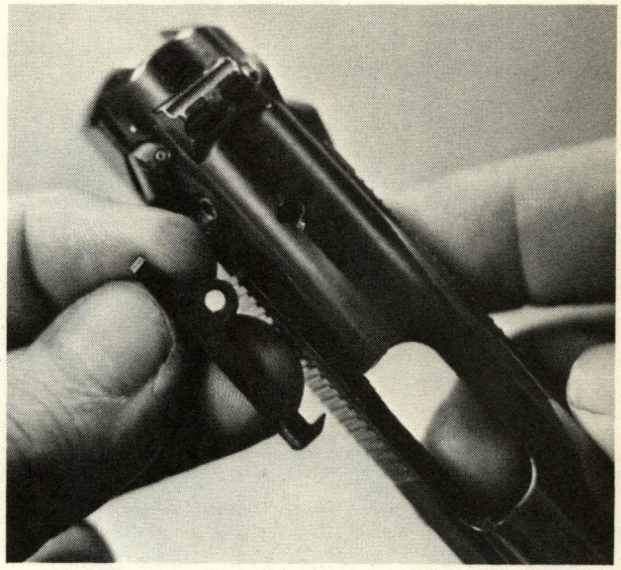
Browning BDA 380 field-stripped

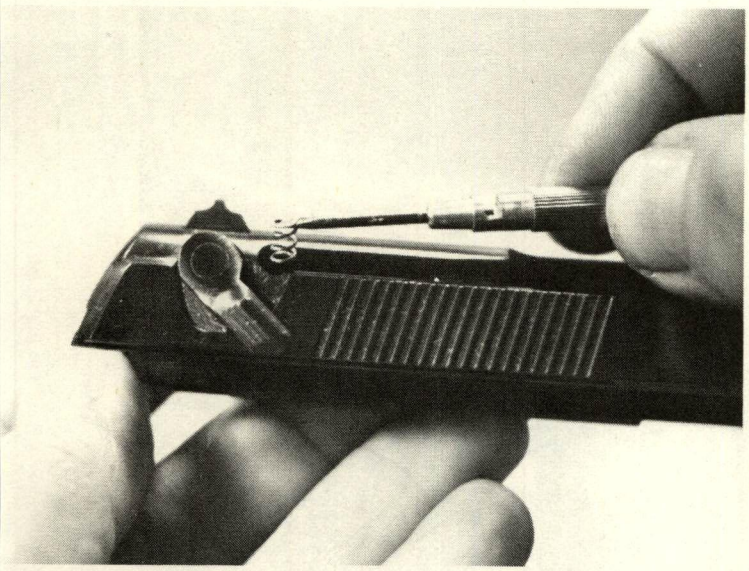
Detail Strip:

6. The extractor pin is drifted out upward.

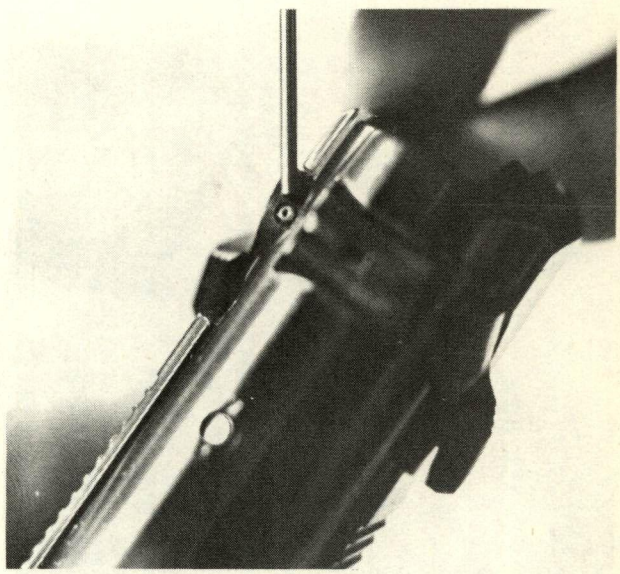


7. With the safety in the on-safe position, remove the extractor toward the right.





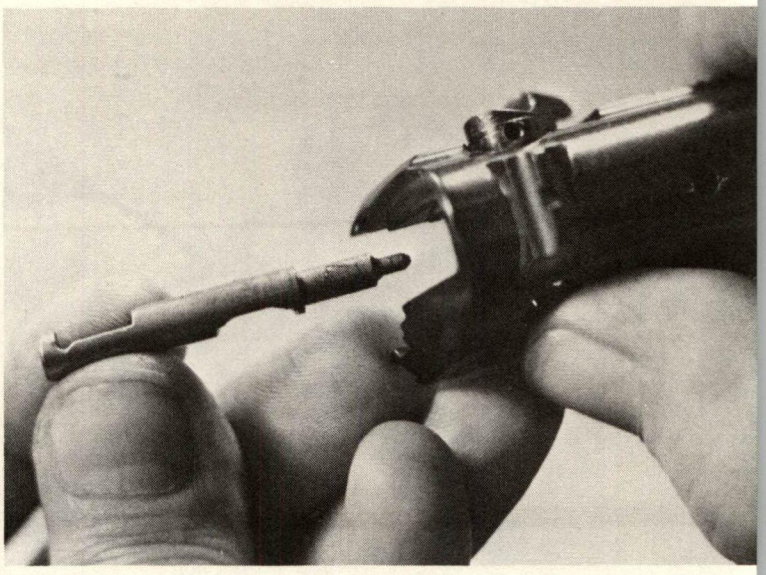
8. Remove the extractor spring from its recess in the slide.



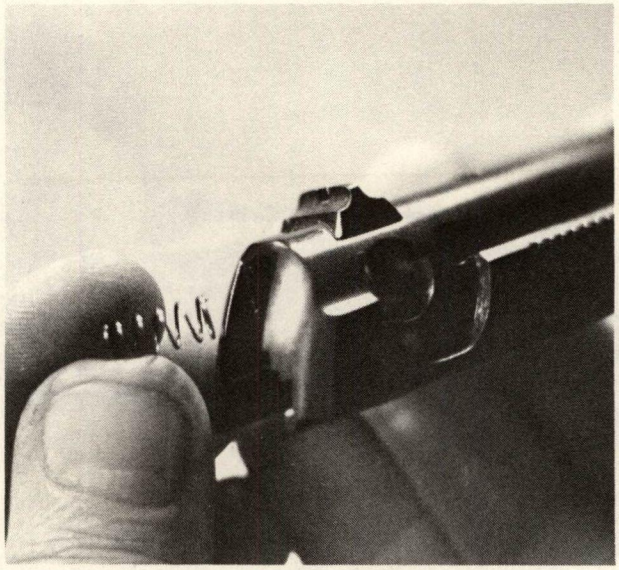
9. Use a small roll pin punch to drift out the roll pin in the base of the right safety-lever, downward.

10. Turn the safety-lever upward to clear its lower tab, and remove it toward the right.

11. Move the safety toward the left until it stops, and remove the firing pin from the rear of the slide. The safety must be in the off-safe position.

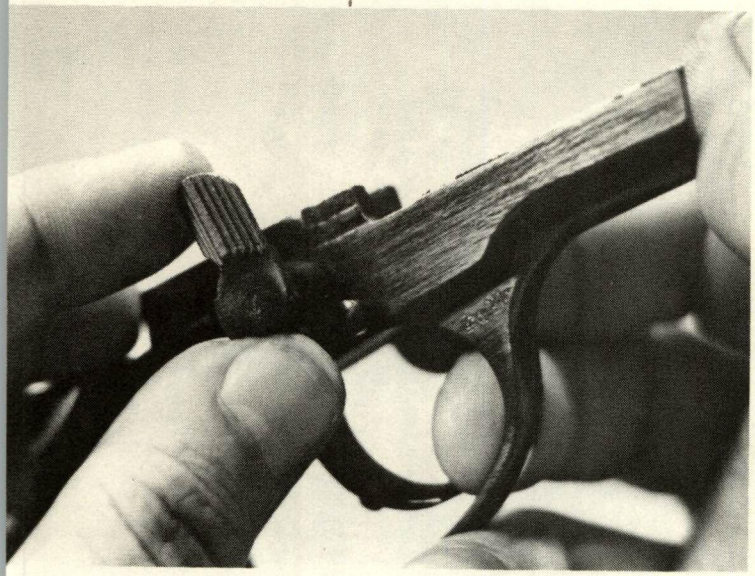


12. Be sure the firing pin spring is at the front of its tunnel, and remove the safety toward the left. The safety positioning ball and spring are staked in place, and should not be removed.

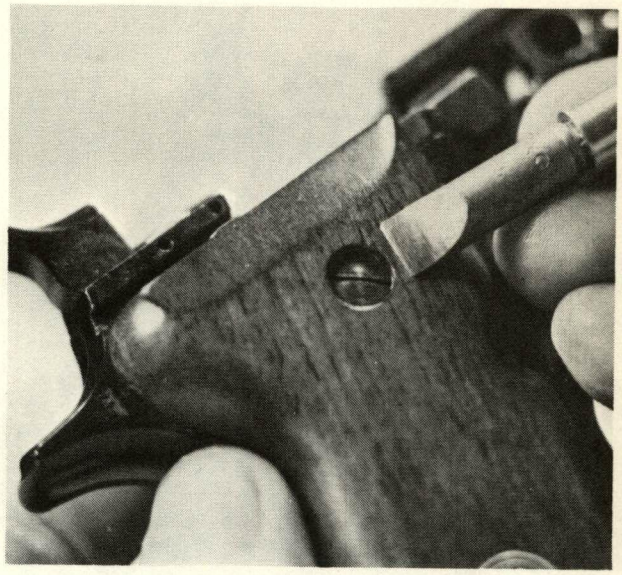


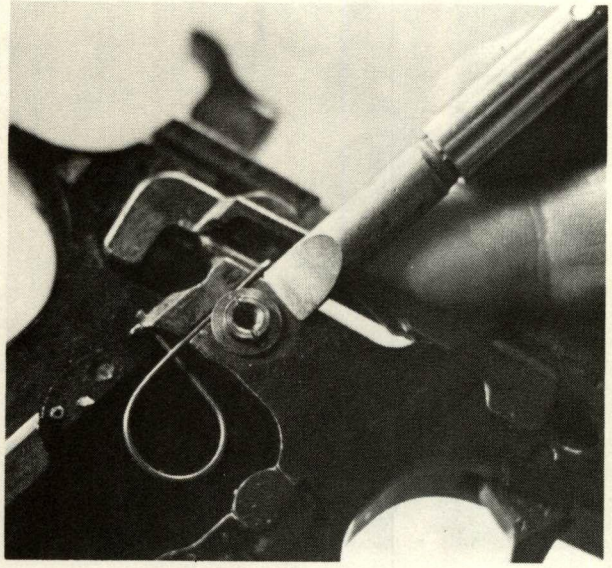
13. Remove the firing pin spring from the slide.

14. Depress the takedown-latch lock button, turn the lever up to vertical position, and remove the latch toward the right.

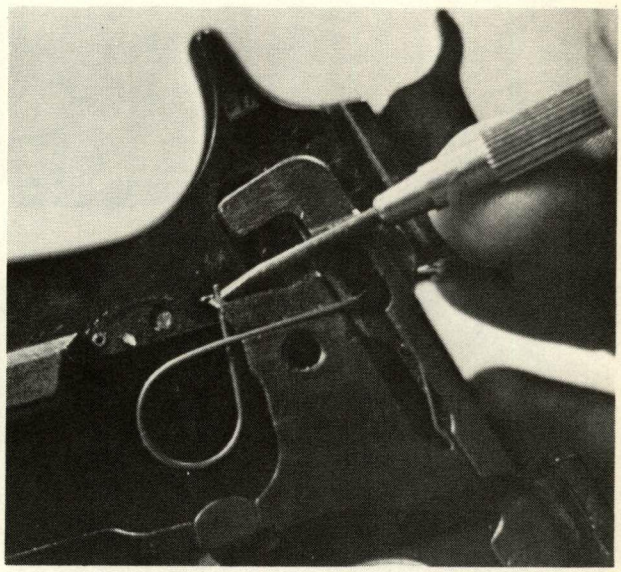


15. Remove the grips, using a screwdriver with a wide and very thin blade. If necessary, grind or file one to fit.



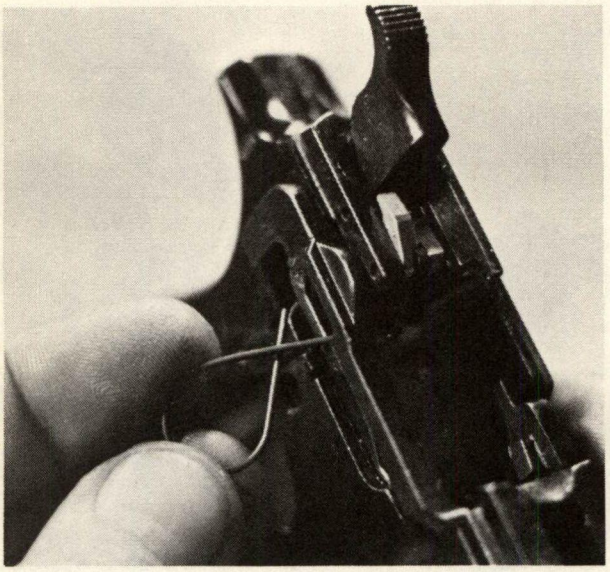


16. Using the same screwdriver, remove the upper grip screw escutcheon on the right side.

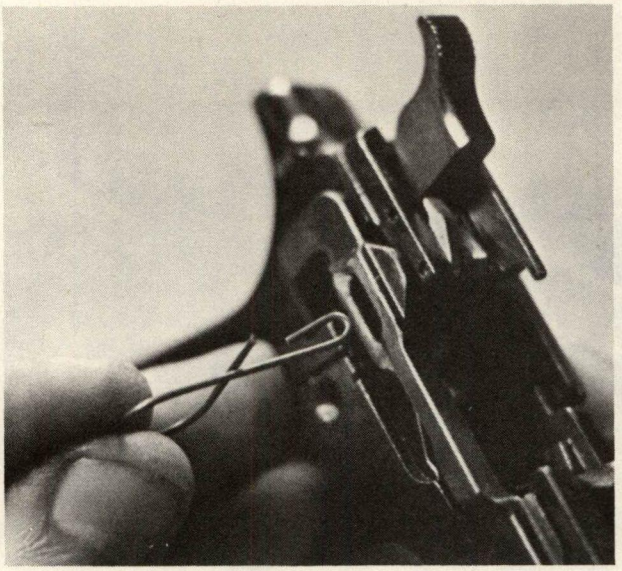


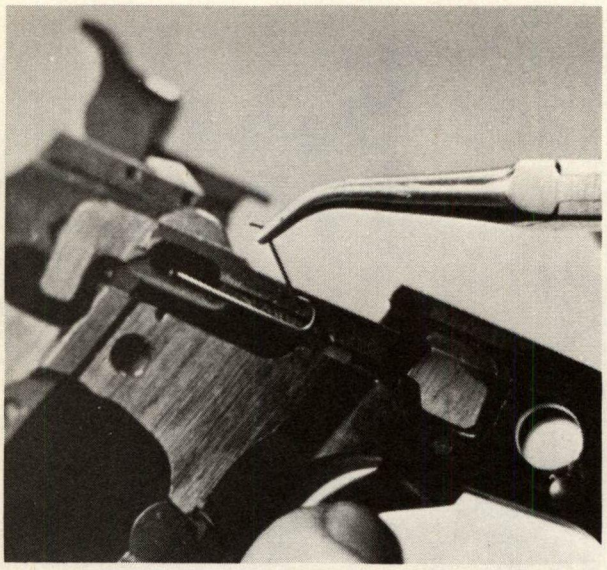
17. With a tool or fingertip, unhook the lower arm of the magazine safety spring from its notch in the frame.

18. Lift the spring out of its slot in the frame, and move it inward to clear its upper loop from the opening in the trigger bar.

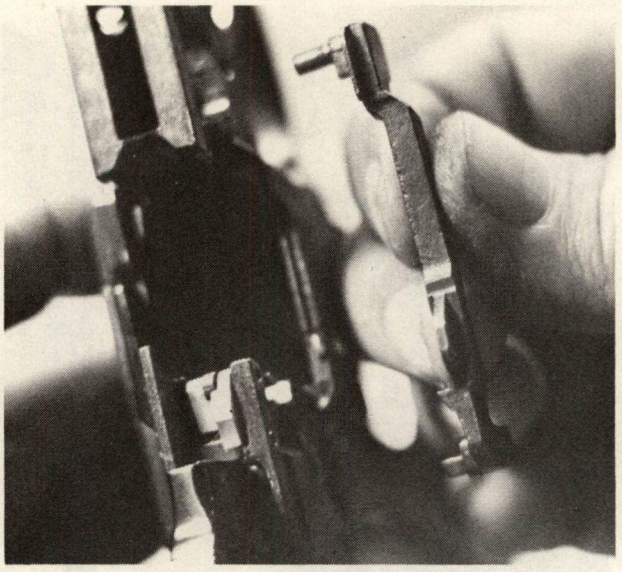


19. Turn the spring, and remove it toward the right.



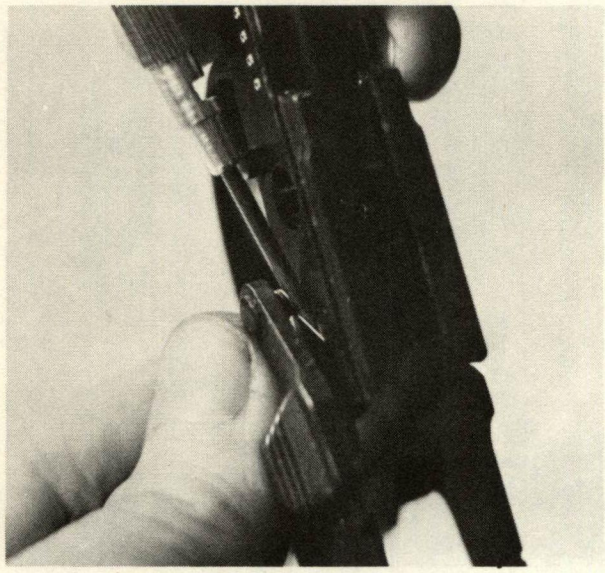


20. Flex the upper arm of the trigger bar spring downward and outward, disengaging it from its slot in the underside of the trigger bar. Pull the trigger to give clearance, and lift the spring out of its recess.

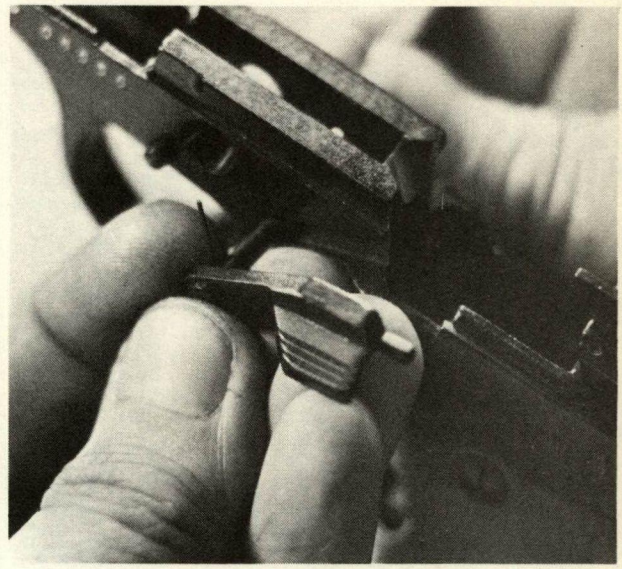


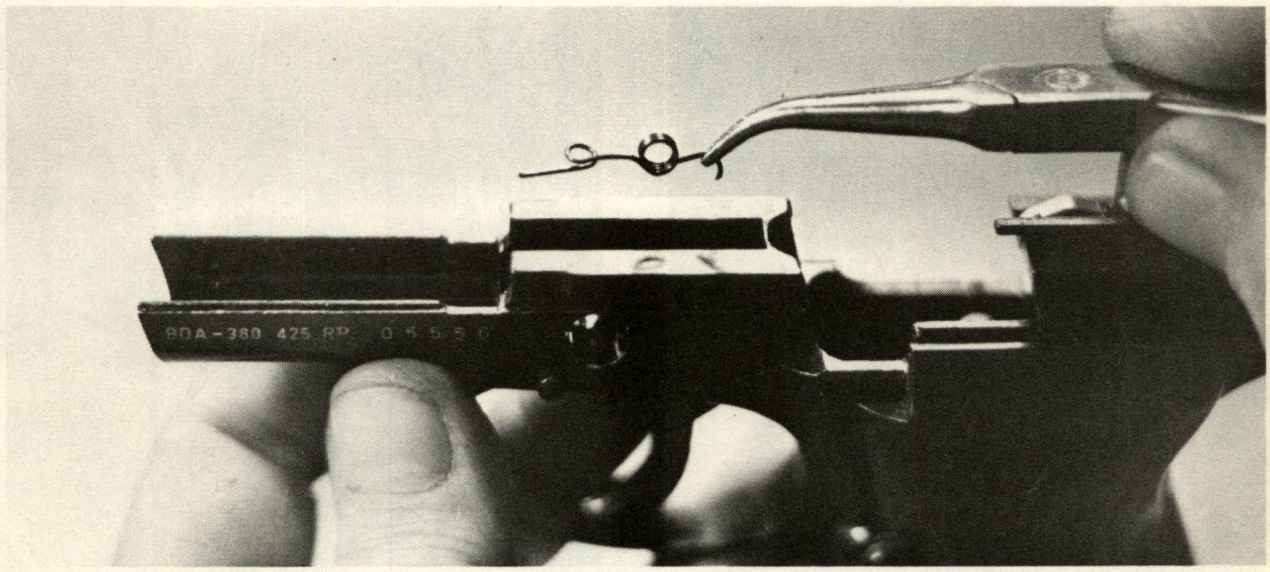
21. Remove the trigger bar toward the right.

22. The cross-shaft of the slide latch is also the trigger pivot. Lift the side latch at the rear to clear the frame, and move it slightly toward the left. Insert a small screwdriver to disengage the upper arm of the slide latch spring from its shelf in the frame.



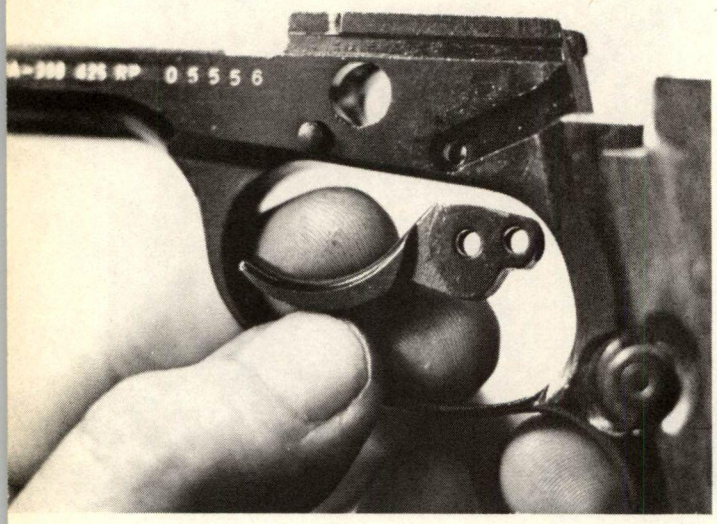
23. Remove the slide latch toward the left, and take off its spring.



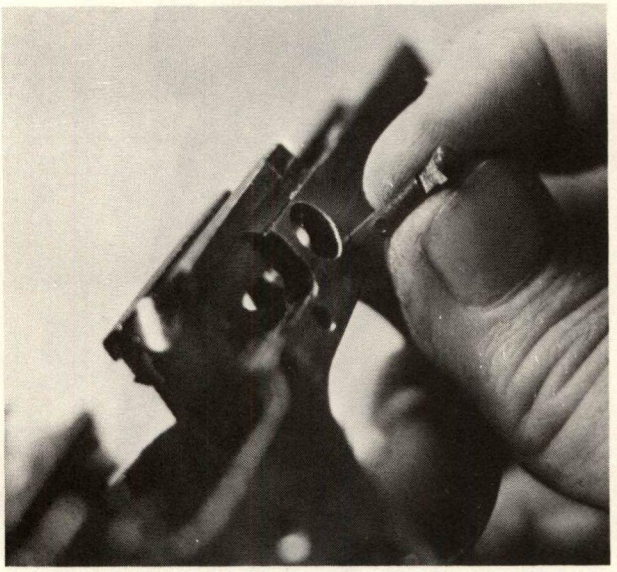


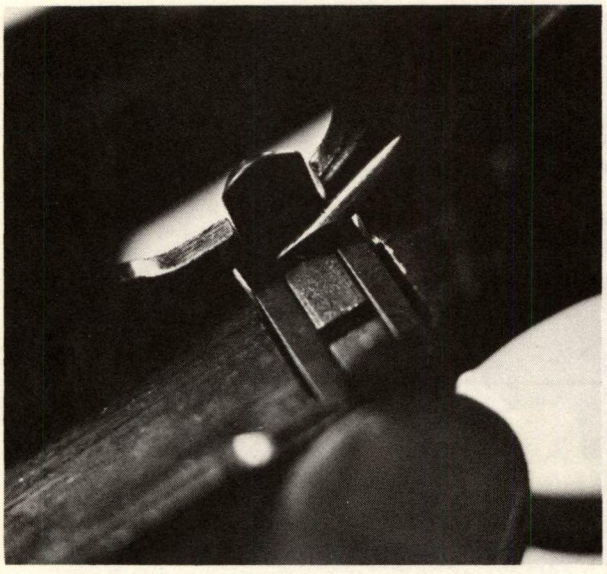
24. Remove the trigger spring upward.

25. Tip the top of the trigger down into the rear of the guard, and remove it toward either side.

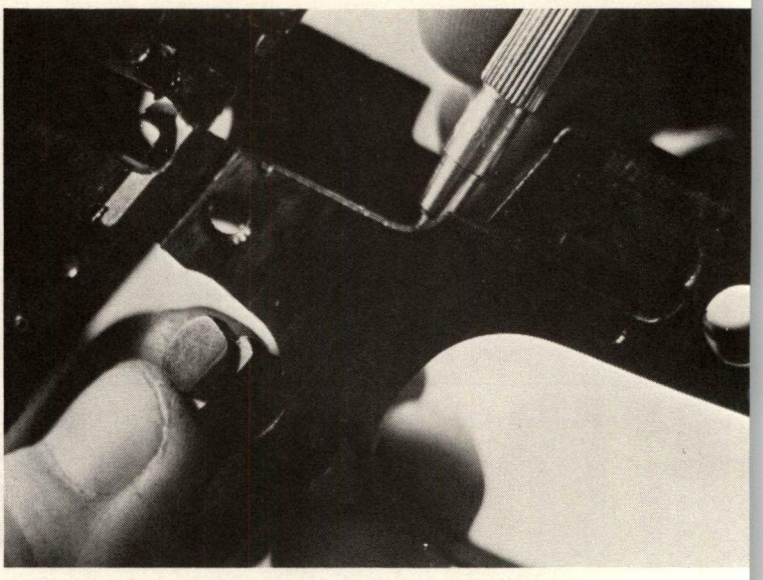


26. Remove the takedown-latch lock button toward the right.



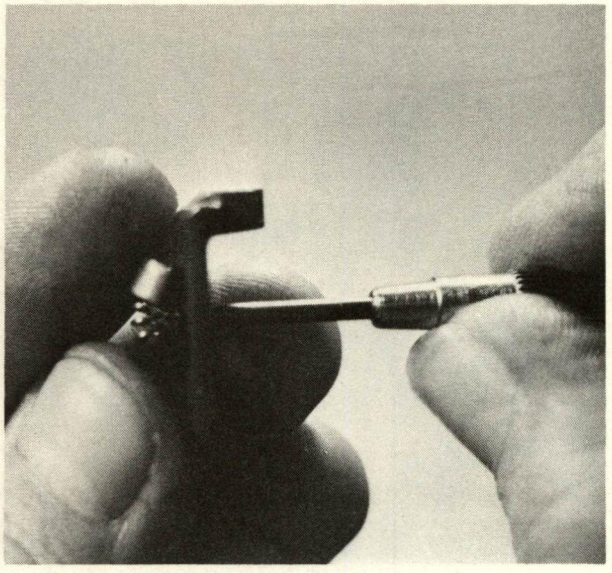


27. Insert a tool to push the longer left block in the rear of the magazine catch toward the right, while pushing the catch toward the left, into the magazine well.

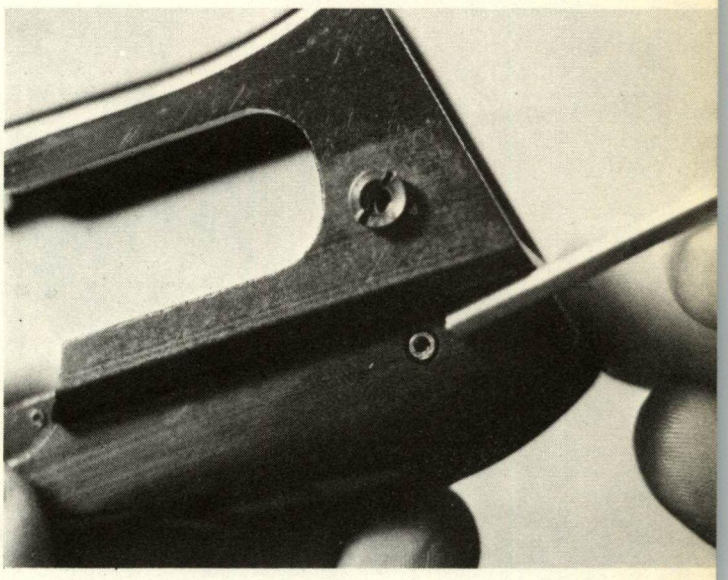


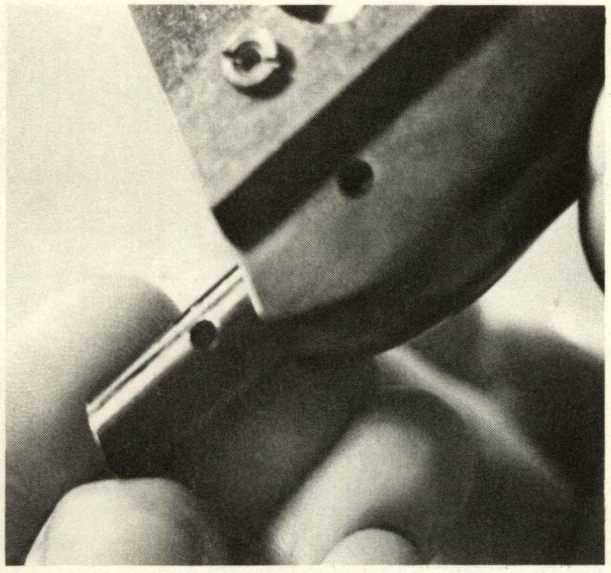
28. When the right end of the catch clears the frame, swing it inward toward the rear, and remove the catch from the frame. For left-handed shooters, the catch can be installed in reverse.

29. The retaining blocks and magazine catch spring can be removed, if necessary, by tipping the blocks outward. Control the spring during removal.

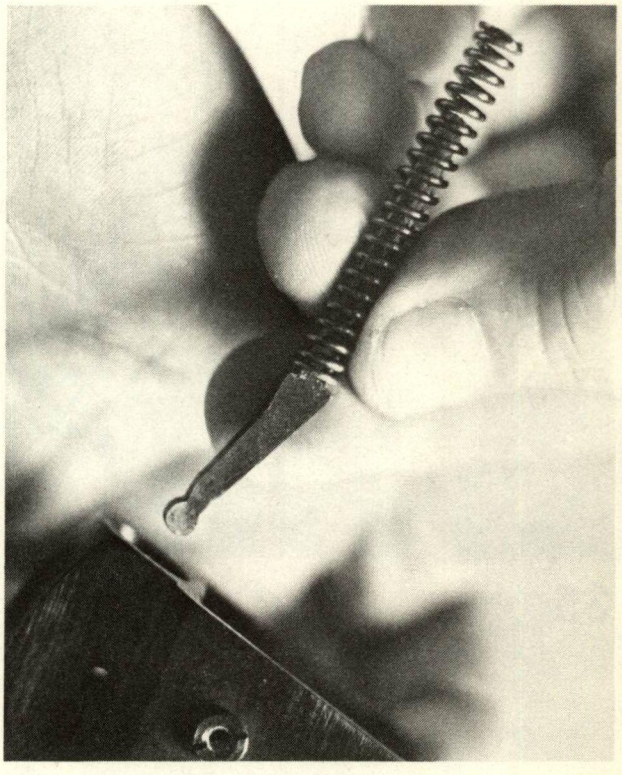


30. With the hammer in fired position, drift out the large roll cross-pin at the lower rear of the grip frame.



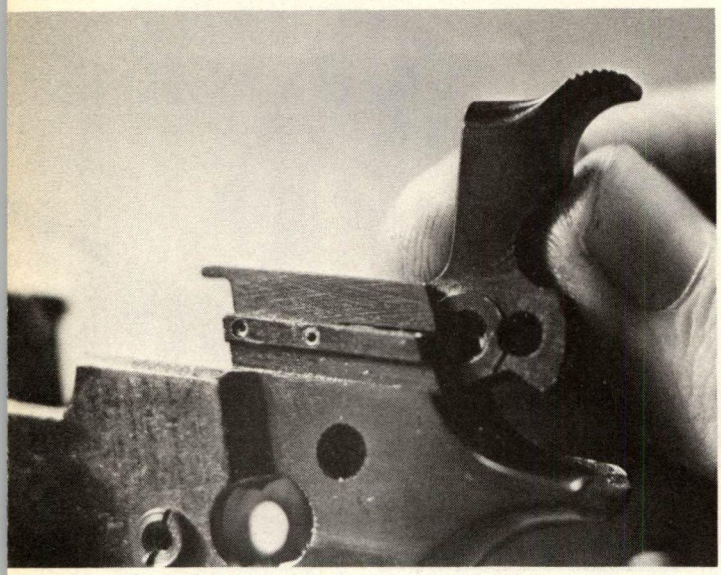


31. The hammer spring base should be forced out when the pin is removed. If it is tight, cocking the hammer will exert pressure to force it out. Remove the base plug from the bottom of the grip frame.

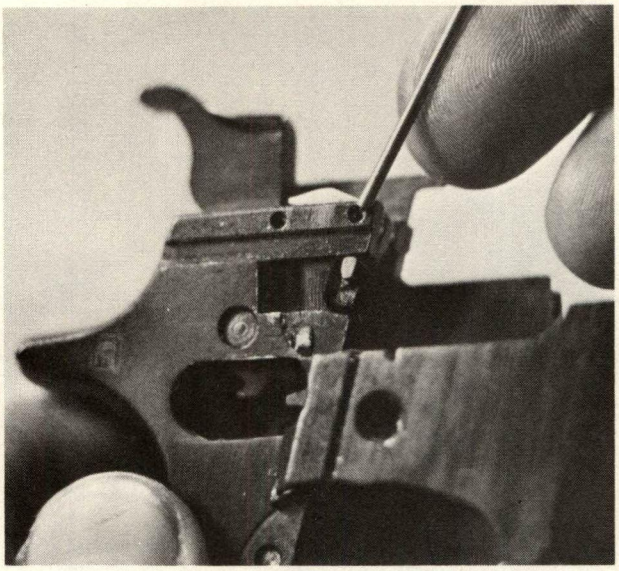


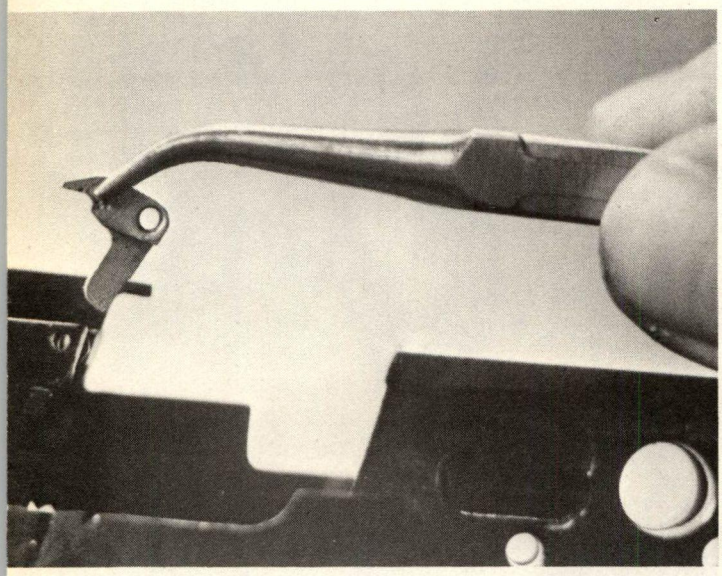
32. Remove the hammer spring and hammer strut from the bottom of the grip frame.

33. Push out the hammer pivot toward the left. Remove the hammer, upward and toward the rear.

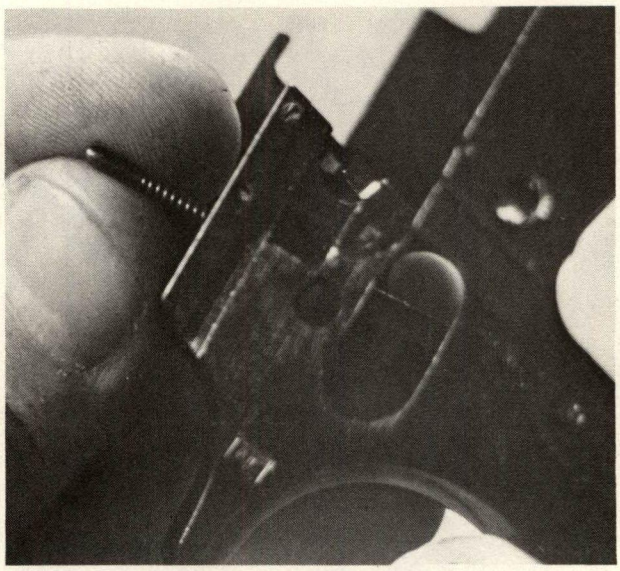


34. Restrain the hammer block to avoid loss of its plunger, and drift out the small roll pin at the top of the frame, just behind the magazine well.



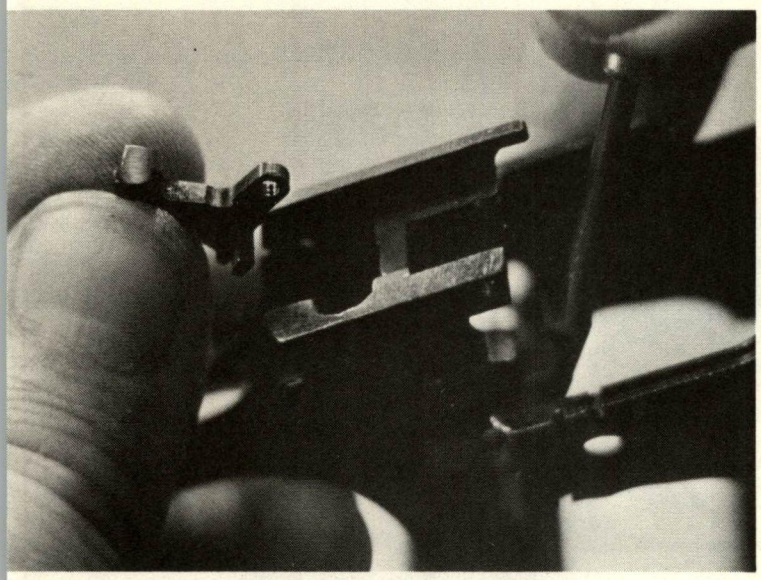


35 Keeping the hammer block under control, remove the safety sear trip (hammer-drop lever) toward the front and upward.

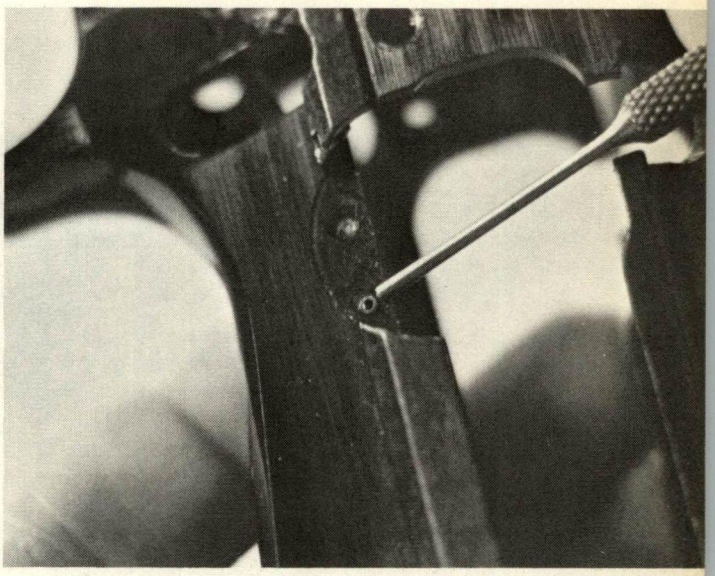


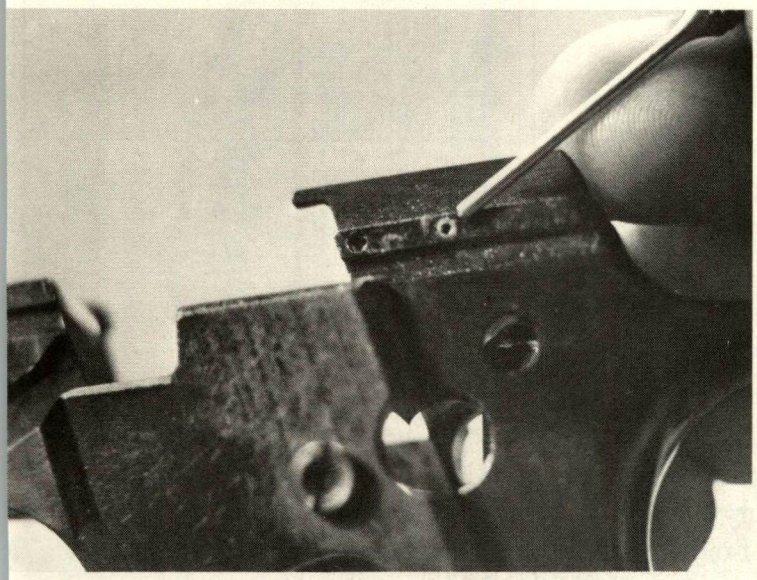
36. Keep a fingertip over the rear to arrest the plunger, and move the hammer block toward the left. Ease out the plunger and spring, and remove them upward.

37. Insert a tool to tip the sear forward, and hold it there. Move the hammer block toward the left, then remove it toward the rear.



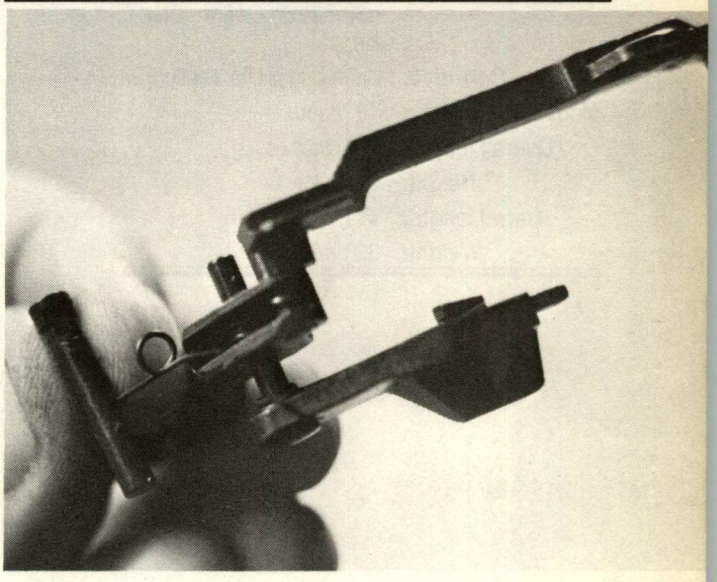
38. Drifting out the small roll pin below the sear pivot will release the lower tail of the sear spring, relieving its tension. Drifting out the sear pivot pin will release the sear and its spring for removal forward, into the magazine well.





39. Drifting out the other small roll pin at the top of the frame will free the ejector for removal upward.

Reassembly Tips:



1. The trigger, trigger spring, trigger bar, slide-latch, and takedown-latch release button are shown in the position they occupy in the frame. When installing the trigger bar, be sure the rear arm of the trigger spring is lifted to bear on the internal pivot of the bar. Also, be sure the forward tip of the spring enters its hole in the takedown-latch release button.

When replacing the hammer block in the frame, take particular care that the plunger and spring do not get away.

Browning Hi-Power

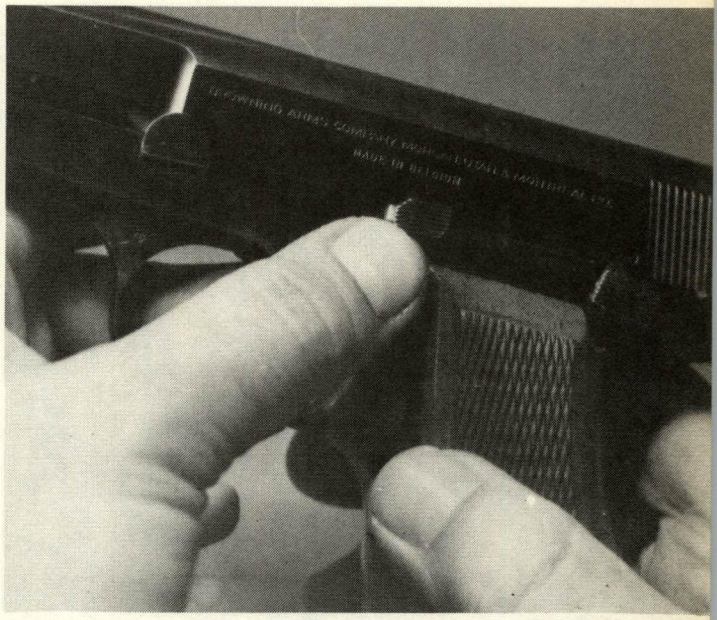
Data:	Browning Hi-Power(P-35)
Origin:	Belgium
Manufacturer:	Fabrique Nationale d'Armes de Guerre (FN), Herstal
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	13 rounds
Overall length:	$7^{9}/_{16}$ inches
Height:	5 inches
Barrel length:	$4^{3}/_{4}$ inches
Weight:	32 ounces

John M. Browning's last pistol design, the Hi-Power has been in continuous production since 1935, and is the standard military sidearm of Belgium, England, Canada, and a number of other countries. It is also popular as a sporting and defense arm in the U.S., and is sold here by Browning in a slightly modified version, the one shown here. The main changes from the original (after about 1974) were in the extractor, sear lever pivot, and the shape of the hammer spur.

Field Strip:

1. Remove the magazine and use the safety to lock the slide open.

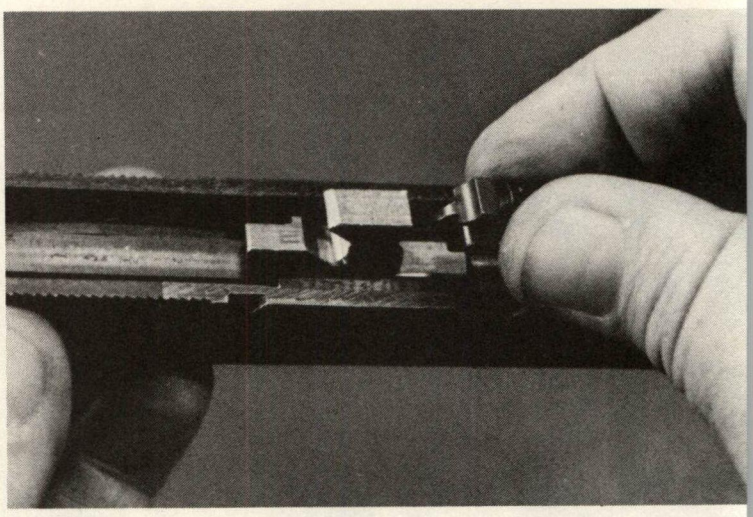
2. Push slide-latch up, and start it out of the frame by pushing on the exposed end of its shaft on the opposite side.

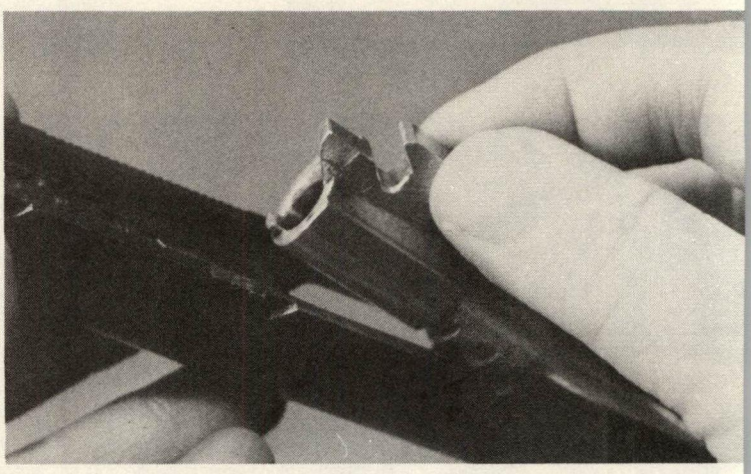


3. Remove the slide-latch from the left side of the frame.

4. Holding the slide against the spring tension, release the safety and run the slide and barrel assembly forward off the frame.

5. Move the recoil spring guide forward, out of engagement with its recess in the underlug of the barrel, and remove the recoil spring and guide. The forward end of the guide has a recessed screw which will release the internal spring and ball that supply slide latch tension.



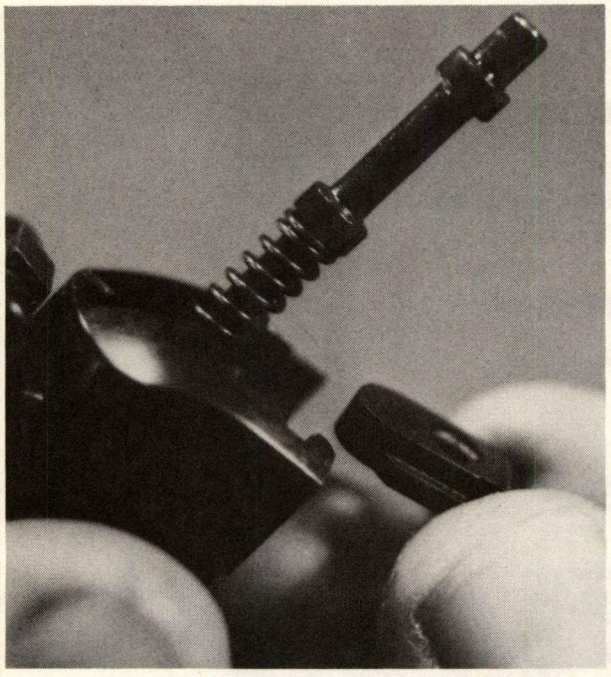


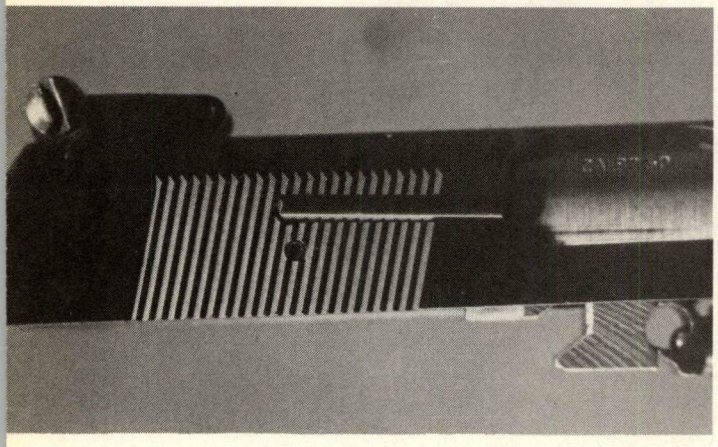
6. Lift the barrel at the rear and remove it from the underside of the slide. **Gun is now field-stripped.**

Browning Hi-power field-stripped

Detail Strip:

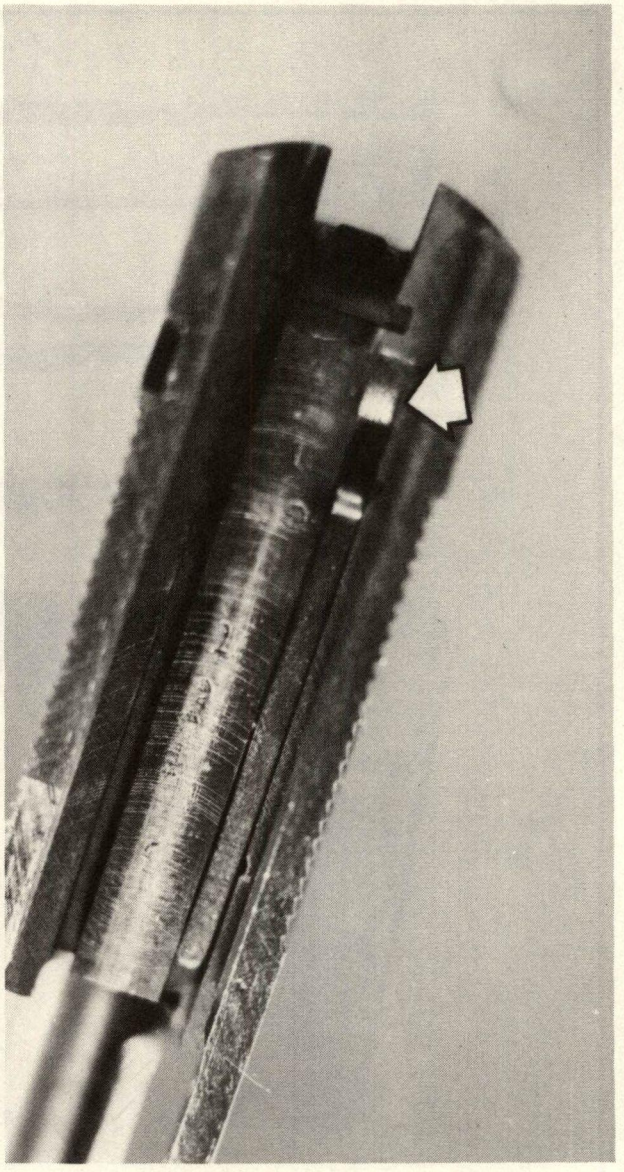
7. Depress the firing pin with a drift of the proper size, and slide the firing pin retainer down and off to release the firing pin and spring for removal. **Caution:** *This spring is under tension so ease it out!*



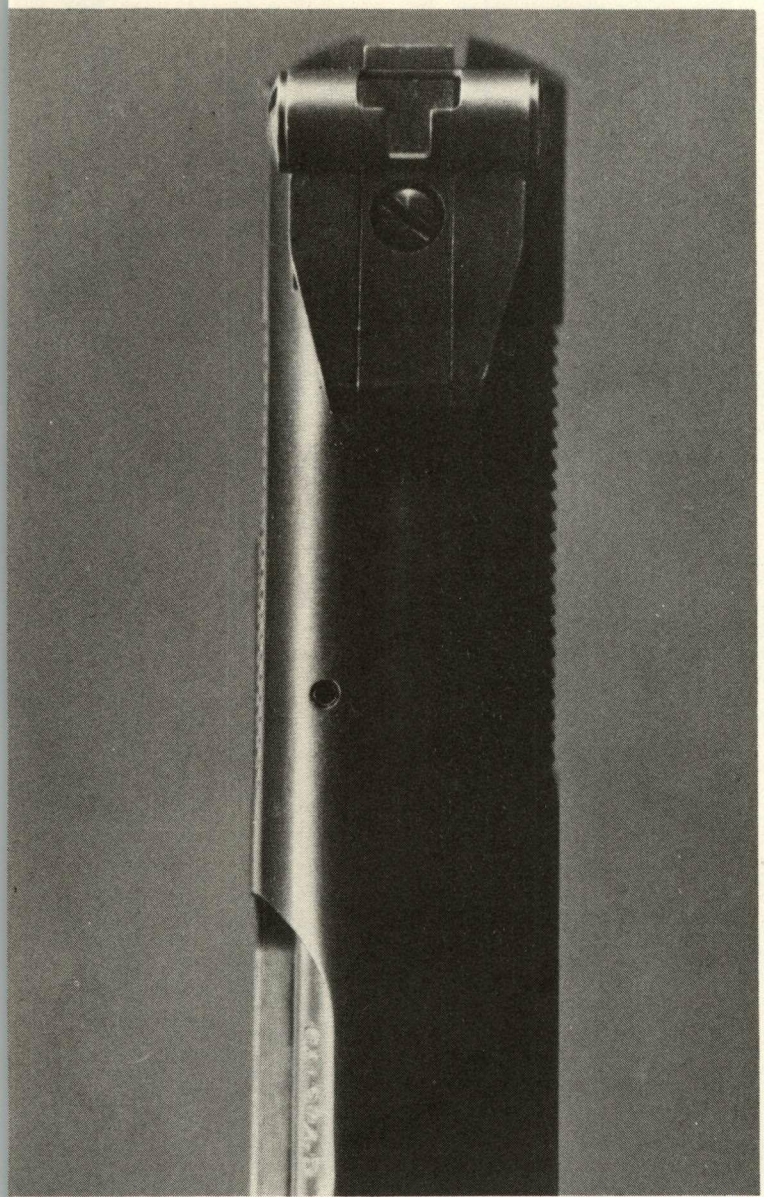


9. On current Hi-Powers, the sear pivot is a simple rolled cross-pin, located just below the extractor tail in this photo. Drifting out this pin will release the sear lever for removal from the underside of the slide.

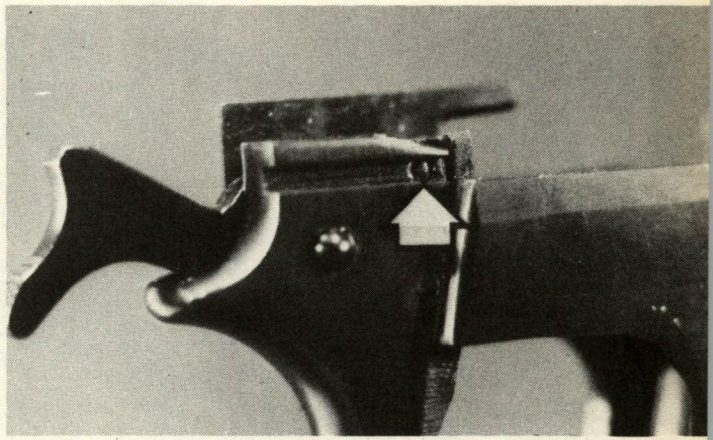
8. The sear lever (arrow) lies in a recess on the right underside of the slide. On older pistols, the extractor is removed in the same manner as our Model 1911 pistol, and this will release the sear pivot and its plate to be removed from the right side of the slide. Shown in the photo is the current model, which has a different system.

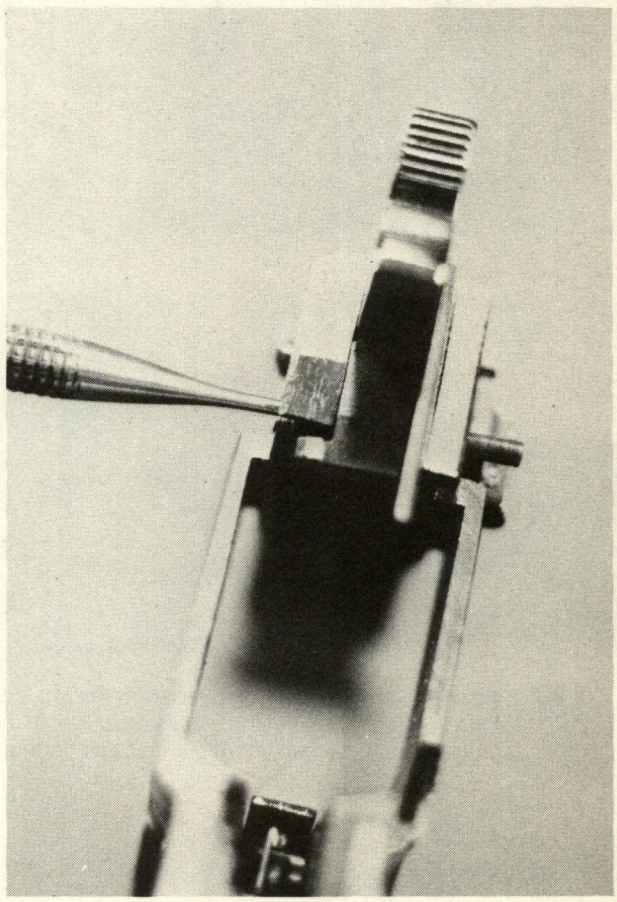


10. On current models, the extractor and its coil spring are released by drifting out a single vertical rolled pin.



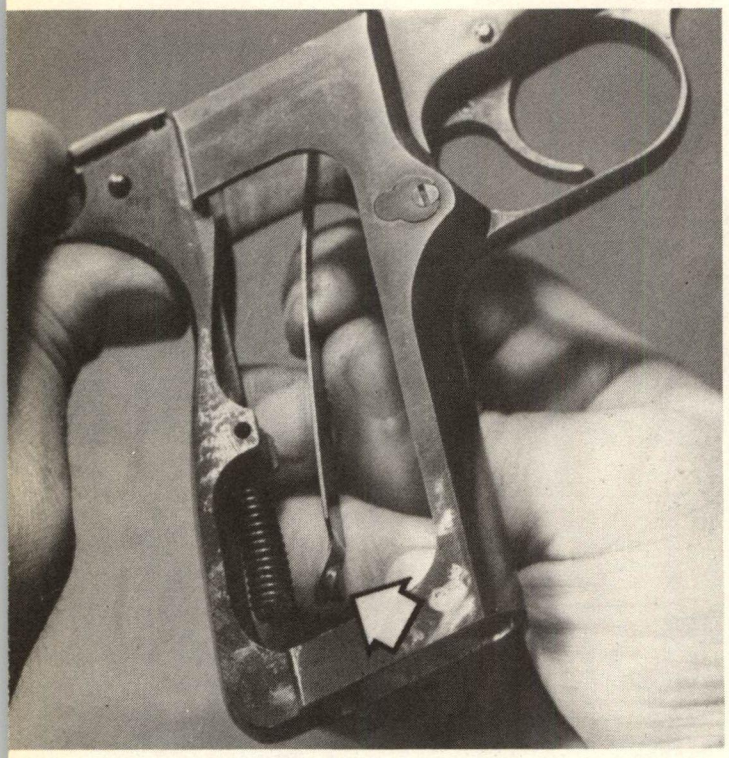
11. The sear pivot pin (arrow) which also stabilizes the ejector, is located at the top rear of the frame, in the slide track.

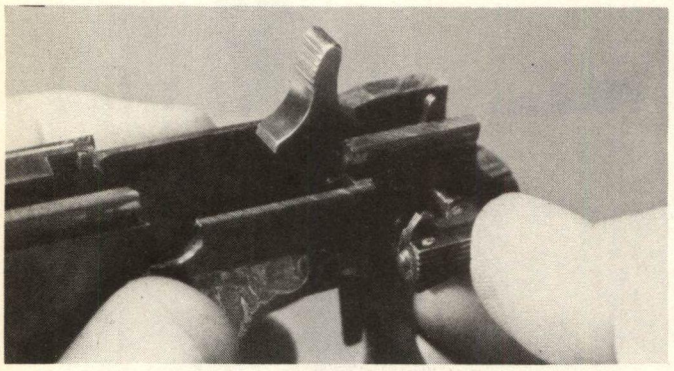




12. With the hammer down, drift out the sear pin and remove the sear from the top of the frame.

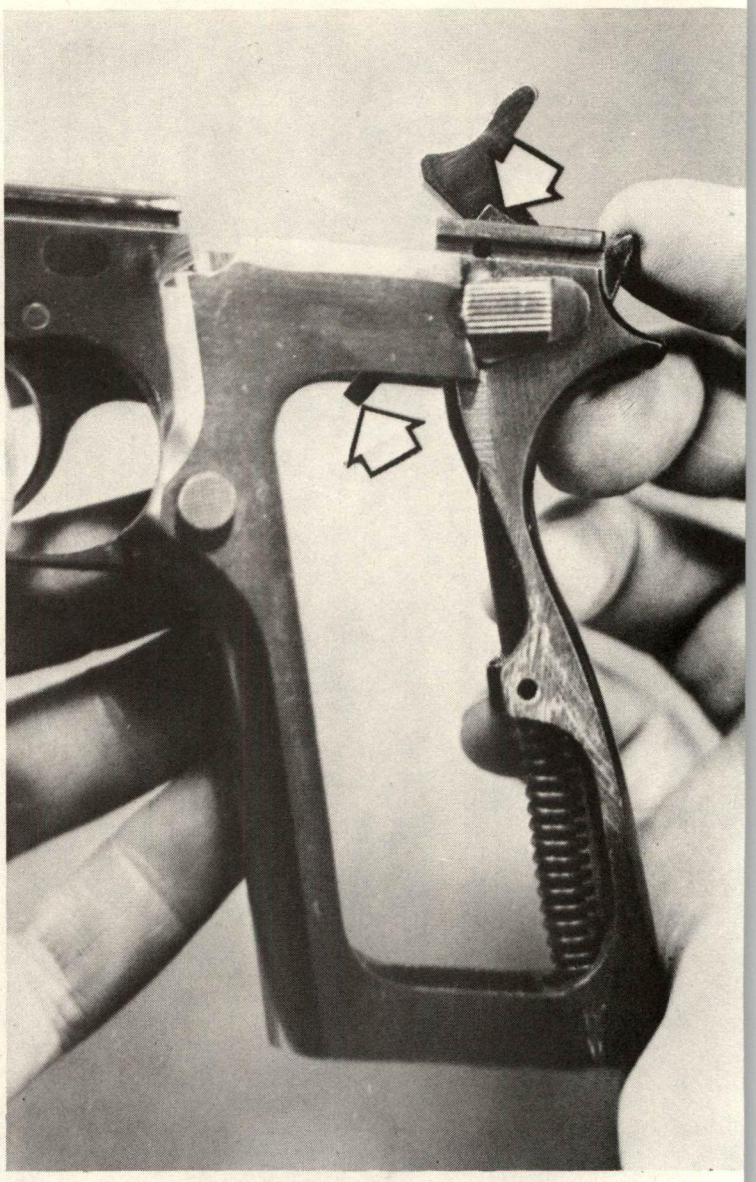
13. Draw the hammer back to compress the mainspring upward, and lift the sear spring stud (arrow) from its recess at the bottom of the grip frame. Remove the sear spring forward, into the magazine well.



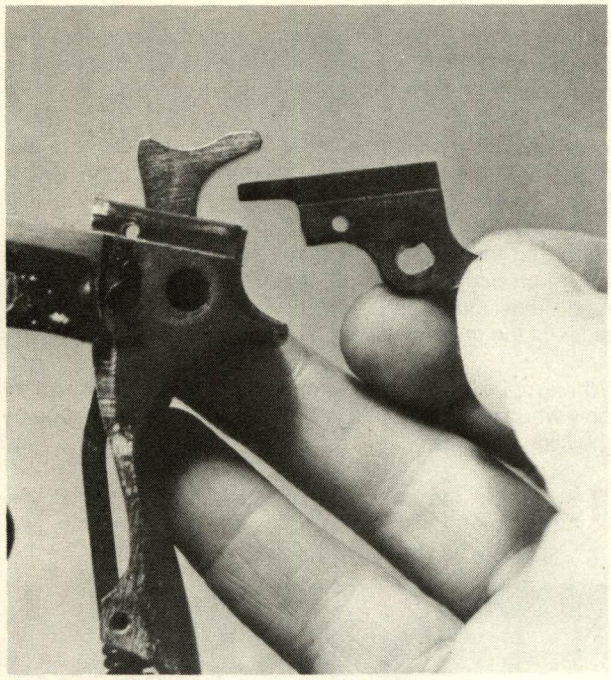


15. The safety can now be removed from the left side of the frame. Driving out the small vertical pin in the safety will release the detent plunger and spring.

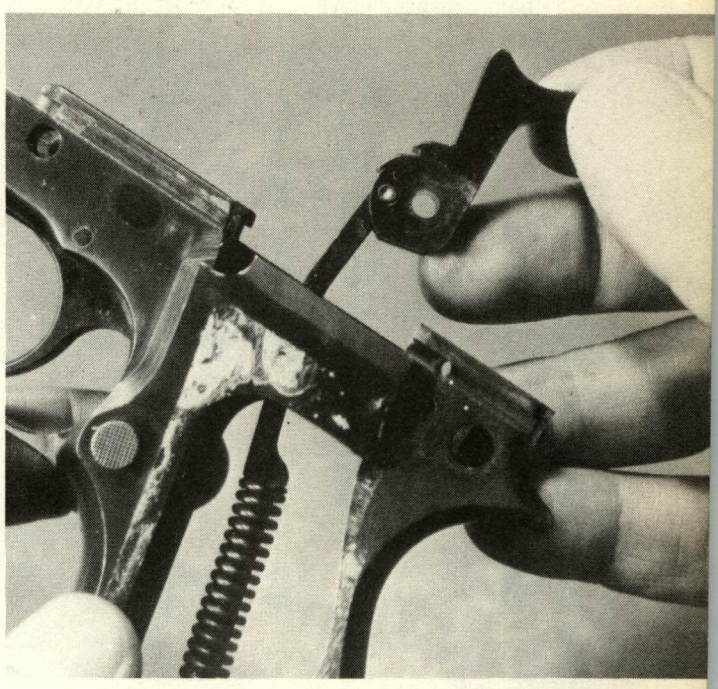
14. Rotate the ejector (arrow) forward and down to free the safety catch.

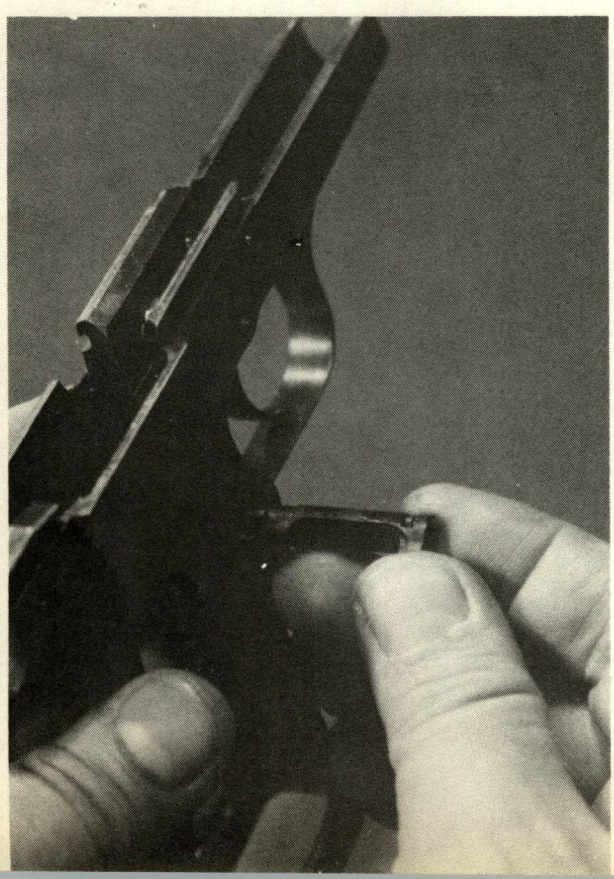


16. Removal of the safety will release the ejector, which is lifted out the top of the frame.



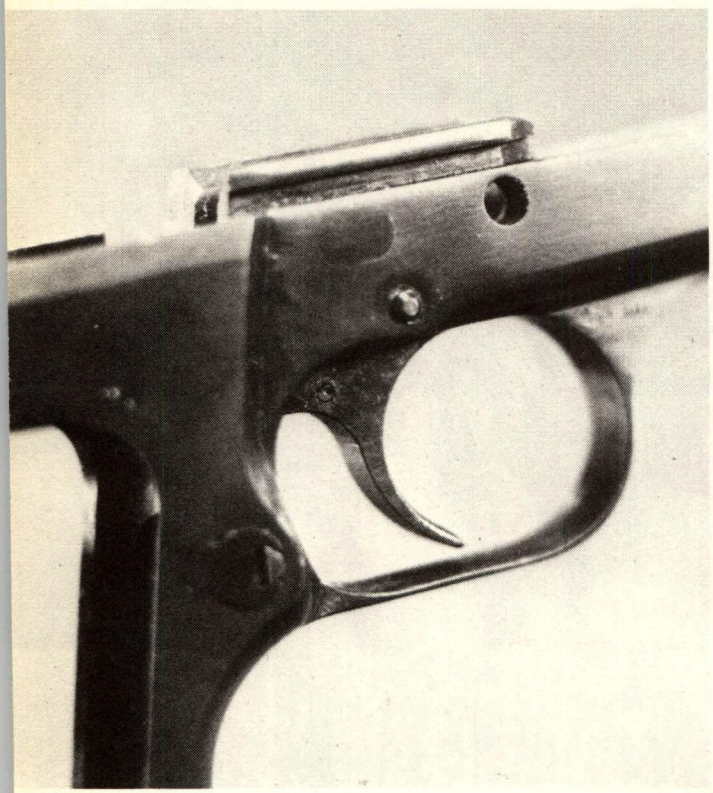
17. The hammer and its attached strut and spring are now moved forward to clear the spring from its shelf in the frame, and lifted out the top. The strut is cross-pinned to the hammer, and the spring is held by an adjustment nut and tiny cross-pin at the lower end of the strut.





18. The magazine release is retained by a screw-slotted catch on the right side. Push in the catch button until it is level with the frame, turn the slotted retainer toward the left, and remove the catch assembly toward the right side. The retainer and spring are removed by turning the slotted piece back toward the right. **Caution:** *Spring is under tension; ease it out!*

19. The trigger pin is retained by a groove at its center, and pressure of an arm of the trigger spring. After the pin is drifted out, the trigger is moved forward and rotated down into the guard for removal. Cross-pins in the trigger hold the trigger spring, magazine safety and its spring. The trigger lever is held in place by an arm of the trigger spring, and by a half-loop at the rear of the trigger. It is easily removed. Note the relationship of these parts before disassembly!



Reassembly Tips:

When replacing the hammer spring on the strut, turn the nut down to clear the cross-pin hole, insert and center the cross-pin, then back the nut off to retain the pin.

When installing the trigger lever on the trigger, be sure the rear arm of the trigger spring lies in the deep notch in the trigger lever.

Note that the loop on the recoil spring guide is offset to insure proper centering of the unit. The raised lug on the guide must protrude below the barrel underlug, and the sides of the guide must align with the lug sides.

When replacing the slide latch, remember that it will enter only when its upper edge is aligned with the lower edge of the slide.

1. To hold the sear spring and hammer in the right position for installation of the sear and sear pin, two spring-type clothespins make handy clamps.

Colt Mustang

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Colt Mustang also apply to the following guns.

Colt Government Model 380 **Colt Mustang Plus II** **Colt Mustang Pocket Lite**

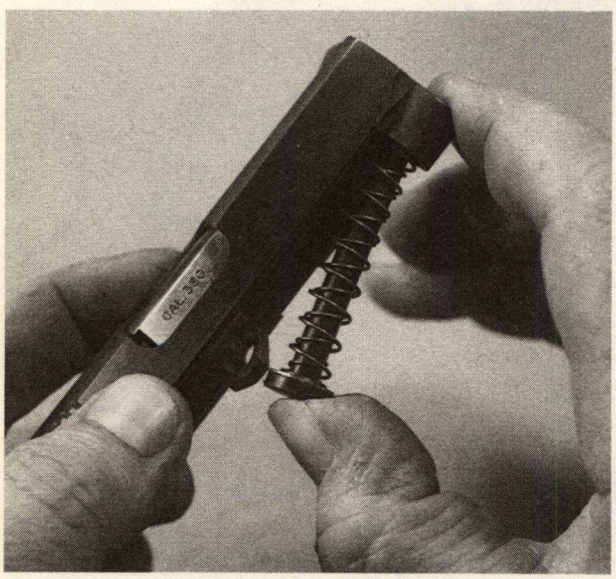
Data:	Colt Mustang
Origin:	United States
Manufacturer:	Colt Firearms, Hartford, Connecticut
Cartridge:	380 ACP
Magazine capacity:	5 rounds
Overall length:	5 1/2 inches
Height:	4 inches
Barrel length:	2 3/4 inches
Weight:	18 1/2 ounces

A reduced-size version of the Colt 380 Government Model pistol, the Mustang is the smallest pistol currently made that has a mechanically-locked breech. There are two alternate versions of the Mustang—the Pocket Lite, with an alloy frame, and the Plus II, which uses the grip frame of the 380 Government Model and holds two extra rounds. All four guns are mechanically identical, and the instructions will apply.

Field Strip:

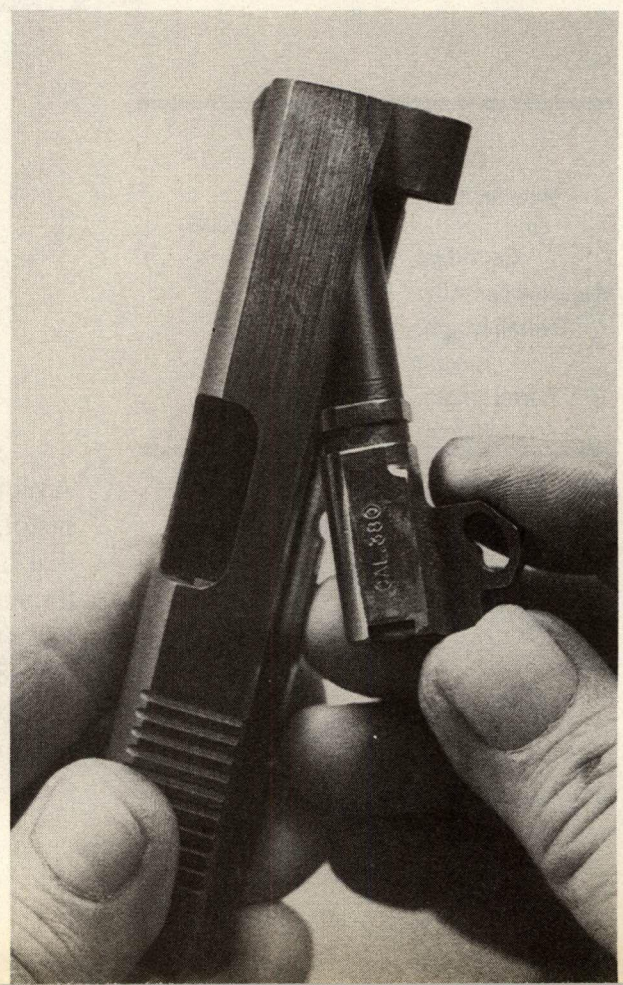
1. With the magazine removed and the hammer cocked, retract the slide until the rear tip of the slide-latch aligns with the semi-circular cut in the left lower edge of the slide, and remove the slide-latch toward the left.

2. Remove the slide and barrel assembly toward the front.



3. Tilt the recoil spring guide out of its engagement with the barrel underlug, and remove it. If the springs are removed from the guide, take care that the metal washer at the rear is not lost.

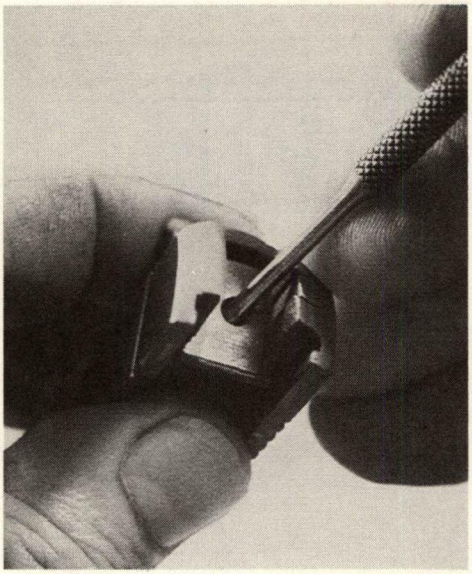
4. Move the barrel slightly forward to clear the extractor, and take it out from the underside of the slide. **Gun is now field-stripped.**



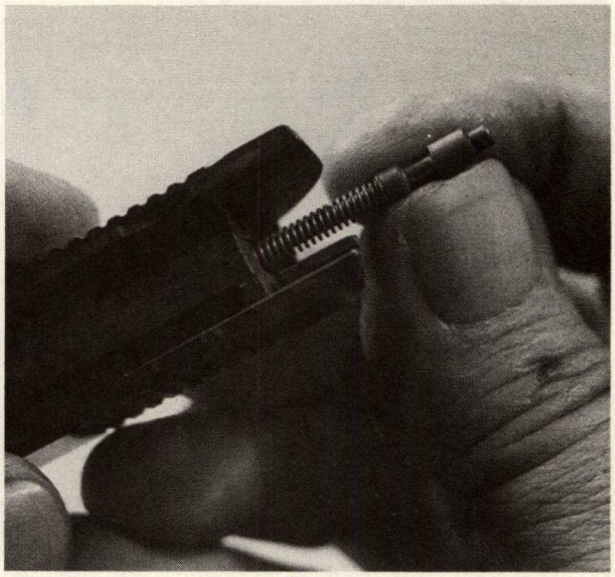
Colt Mustang field-stripped.

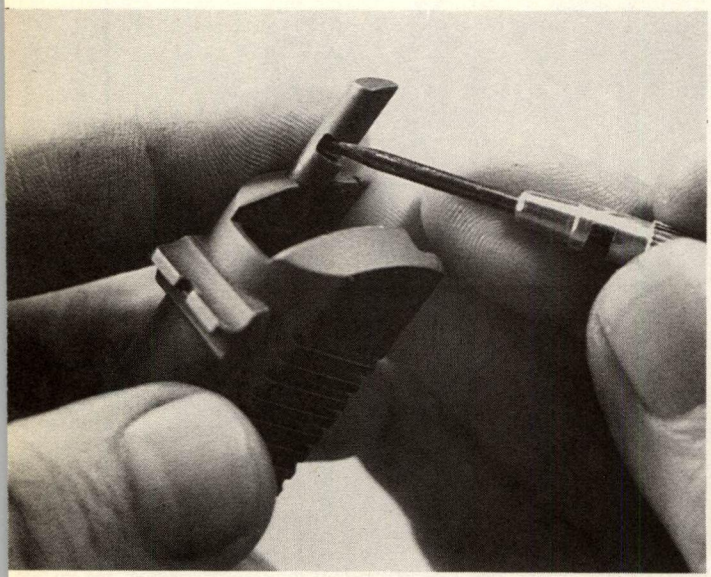
Detail Strip:

5. Depress the firing pin head with a small tool, and slide the retaining plate downward. **Caution:** *The firing pin spring is under tension. Ease it out.*

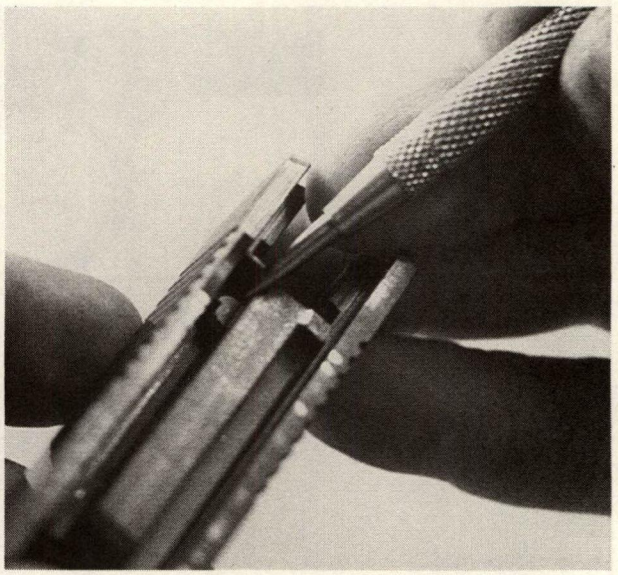


6. Remove the firing pin and its spring toward the rear.



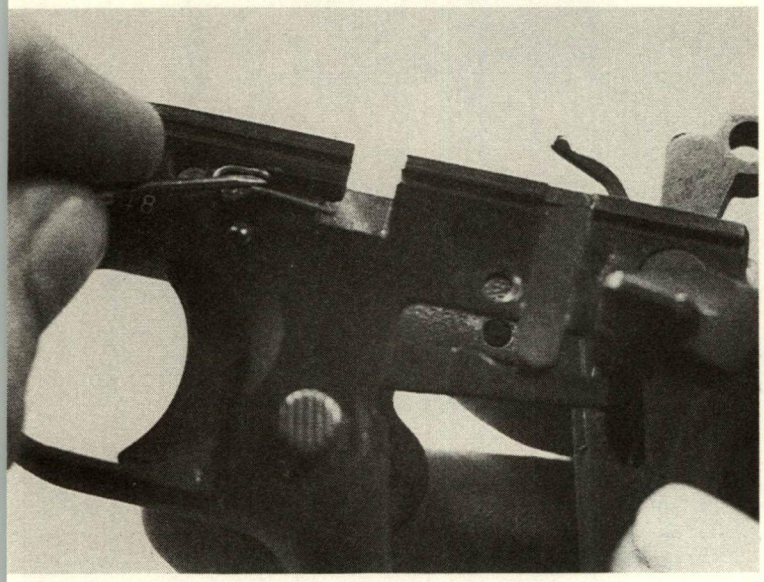


7. With a small tool, nudge the extractor toward the rear, and remove it.

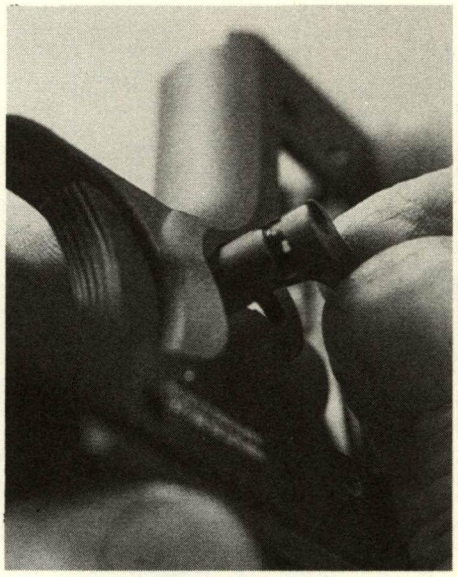


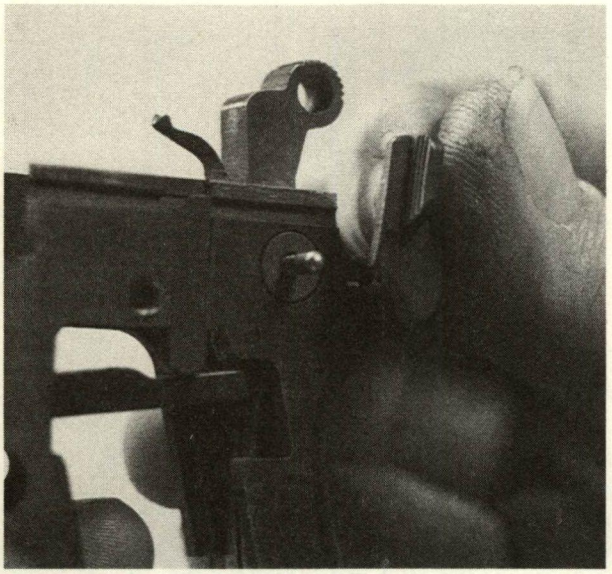
8. To remove the automatic firing pin block and its spring, it is necessary to drift out the rear sight toward the right. The block and spring are then taken out upward.

9. Removal of the slide-latch spring requires that a small tool be inserted near its in-turned tip to lever it outward. Unless replacement is needed, it is best left in place.

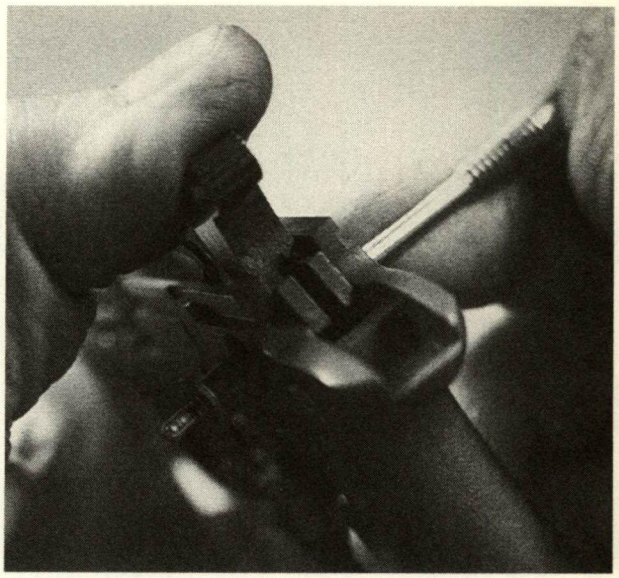


10. Depress the magazine catch fully, and turn the screw-headed retainer counterclockwise until it stops. Remove the magazine catch toward the right. Turning the retainer the other way will release the retainer and spring for removal. **Caution:** *The spring is under tension, control it.*



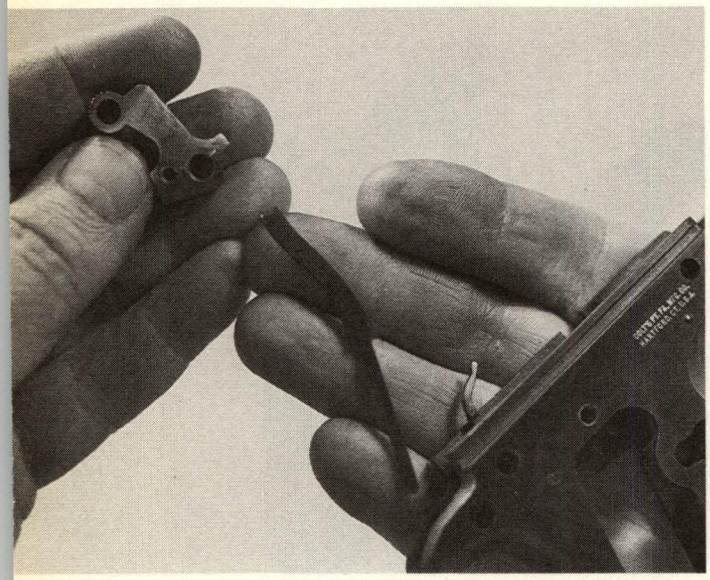


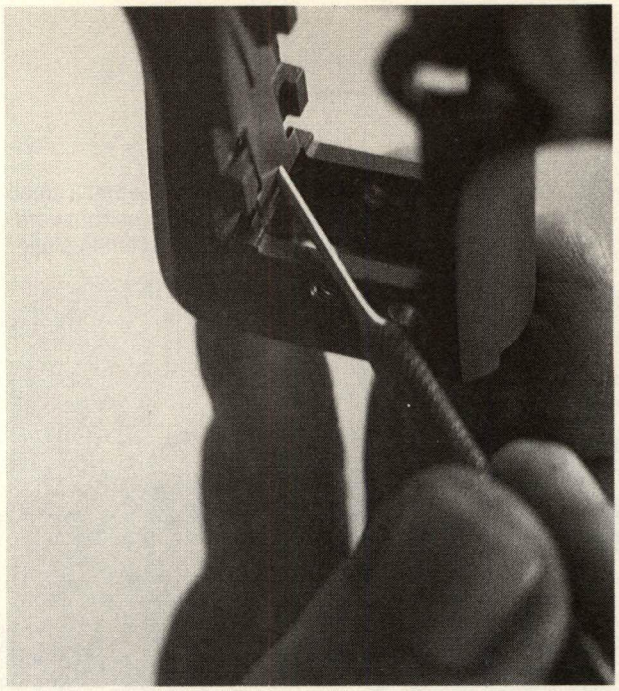
11. With the hammer let down gently to fired position, push the safety upward, beyond its normal on-safe position. **Caution:** *The safety positioning detent and spring will be released as the safety is turned up, and will jump out—restrain them.* Remove the safety toward the left.



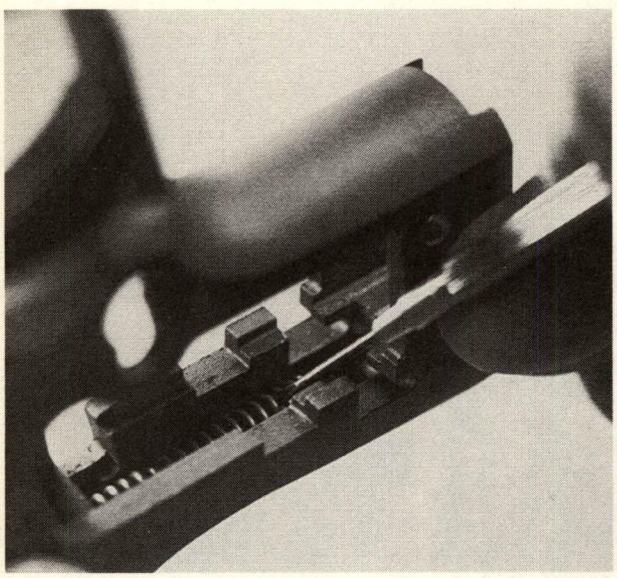
12. Exert downward pressure on the hammer, and push out the hammer pivot toward the left.

13. When the pivot pin is out, the hammer and its strut can be removed from the top of the frame. The hammer spring will stay in the frame, and it is removed later.

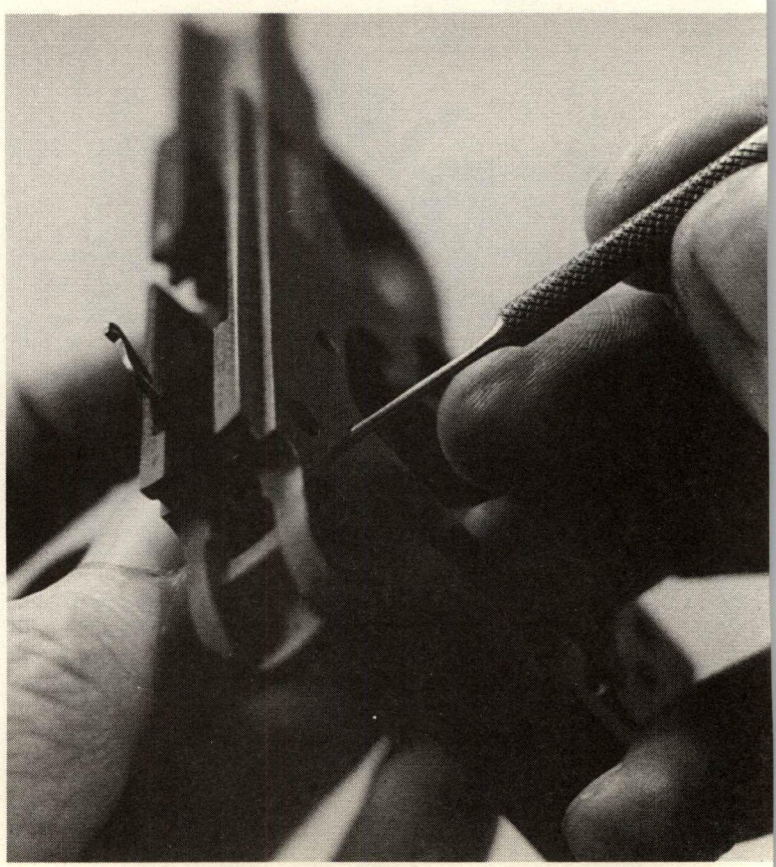




14. Insert a small tool in the hole near the lower end of the combination sear and firing pin lock lever spring, and move the spring upward until it clears its retaining cut in the frame. The spring is then removed through the magazine well.

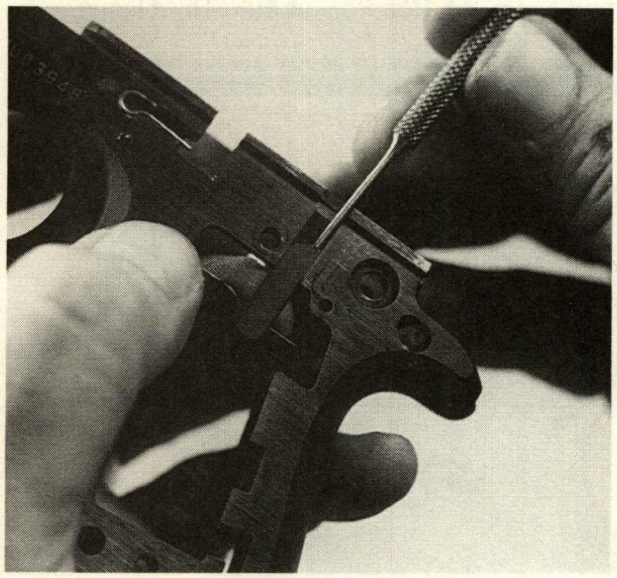


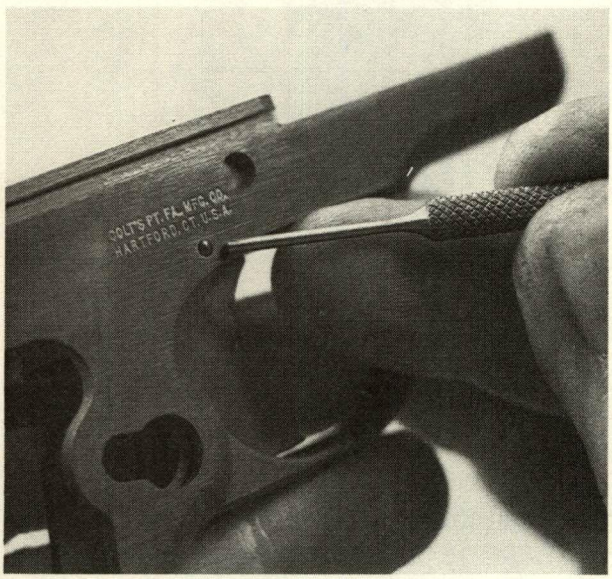
15. The hammer spring can now be nudged out of its recess and removed upward.



16. Pushing out the pivot pin toward the left will release the sear and firing pin lock lever for removal from the top of the frame.

17. If the trigger and trigger bar are not to be taken out, but the disconnector needs replacement, the trigger bar can be flexed to its lowest point, and the disconnector slid down and over it for removal.

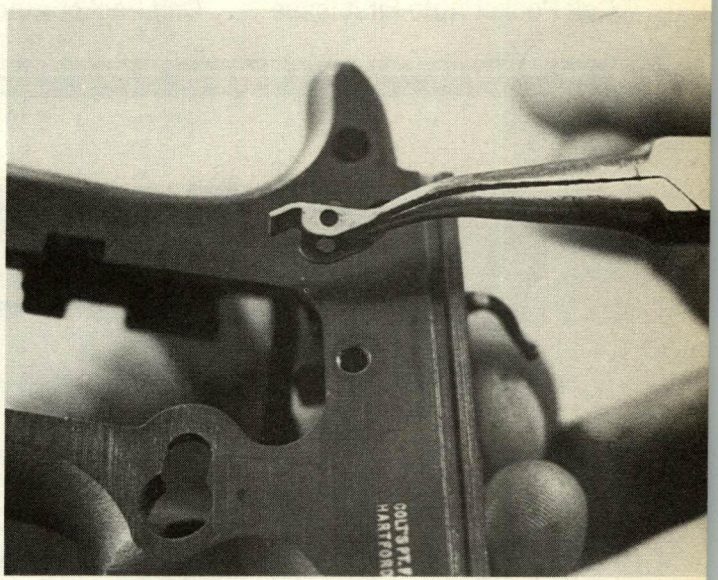




18. Drifting out the trigger pin toward the left will allow removal of the trigger and trigger bar toward the rear. A small cross-pin in the trigger pivots and retains the trigger bar. If the trigger and bar are separated, take care not to lose the small coil spring inside the trigger.

Reassembly Tips:

1. When replacing the sear, note that its proper orientation in the frame is as shown.



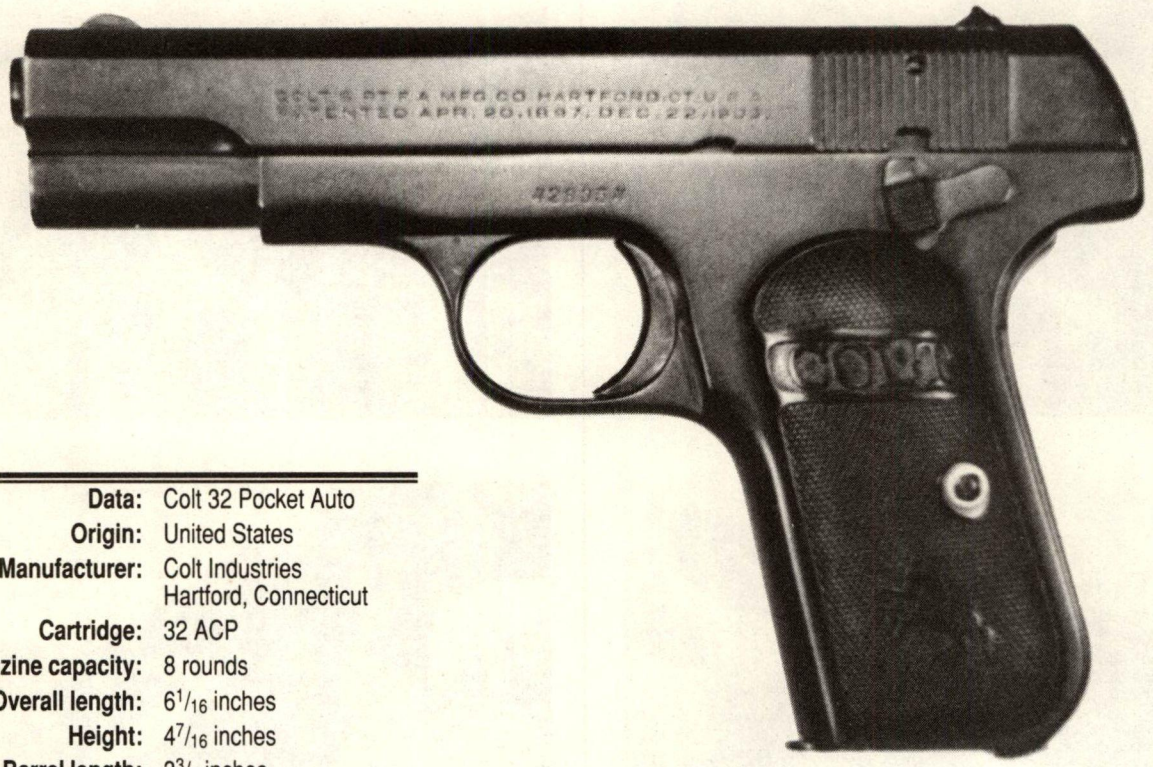
2. Before replacing the slide on the frame, it is necessary to tip the firing pin lock lever over forward, until it snaps into its "down" position, to clear the slide. Insertion of the magazine will automatically restore the lever to operating position.

Colt 32 Pocket Auto

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Colt Pocket Auto also apply to the following guns.

Colt Pocket Auto First Issue **Colt Pocket Auto Second Issue** **Colt Pocket Auto Third Issue**

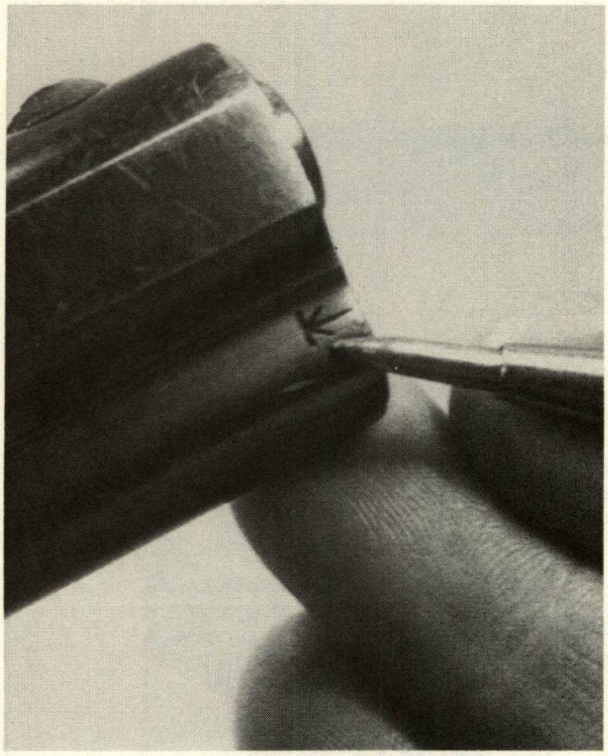


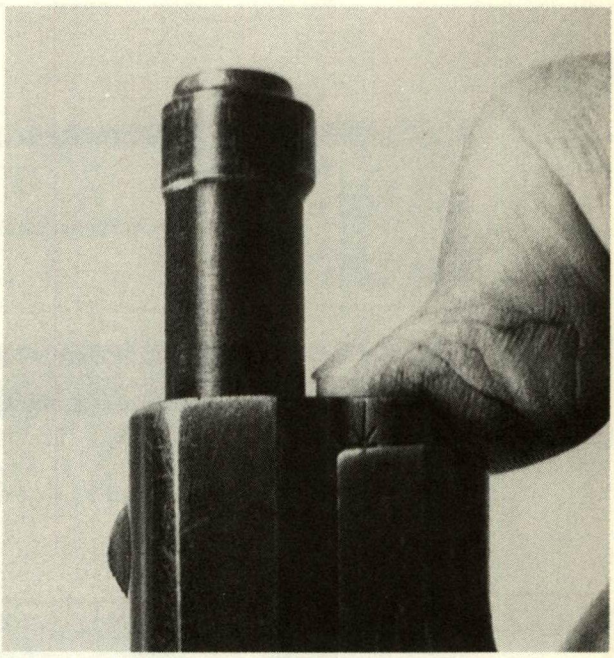
Data:	Colt 32 Pocket Auto
Origin:	United States
Manufacturer:	Colt Industries Hartford, Connecticut
Cartridge:	32 ACP
Magazine capacity:	8 rounds
Overall length:	$6^{1}/_{16}$ inches
Height:	$4^{7}/_{16}$ inches
Barrel length:	$3^{3}/_{4}$ inches
Weight:	24 ounces

Colt officially listed this gun as the Model M, but most people simply refer to it as the "Colt Pocket Auto." Designed by John M. Browning, it was first offered in the 32 ACP chambering, then later in 380 ACP, but the 32 was made in larger quantity. Guns made very early in the production run have a different barrel and a separate barrel bushing at the muzzle, along with other small differences, but mechanically they are essentially the same. The Colt Pocket Auto had one of the longest continuous production runs of any pocket auto, from 1903 to 1946.

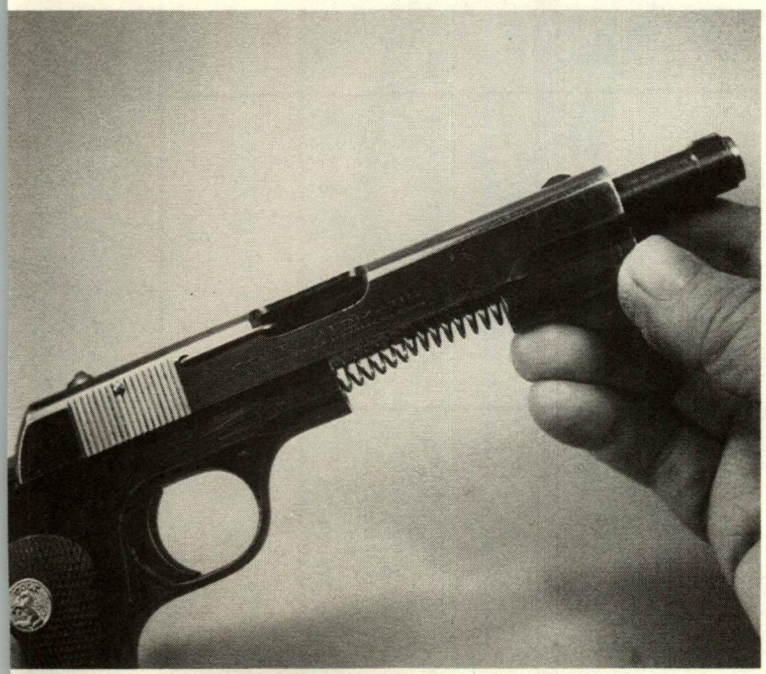
Field Strip:

1. On the lower right front of the slide is stamped a small arrow pointing to a line, a guide to the proper position of the slide for disassembly.

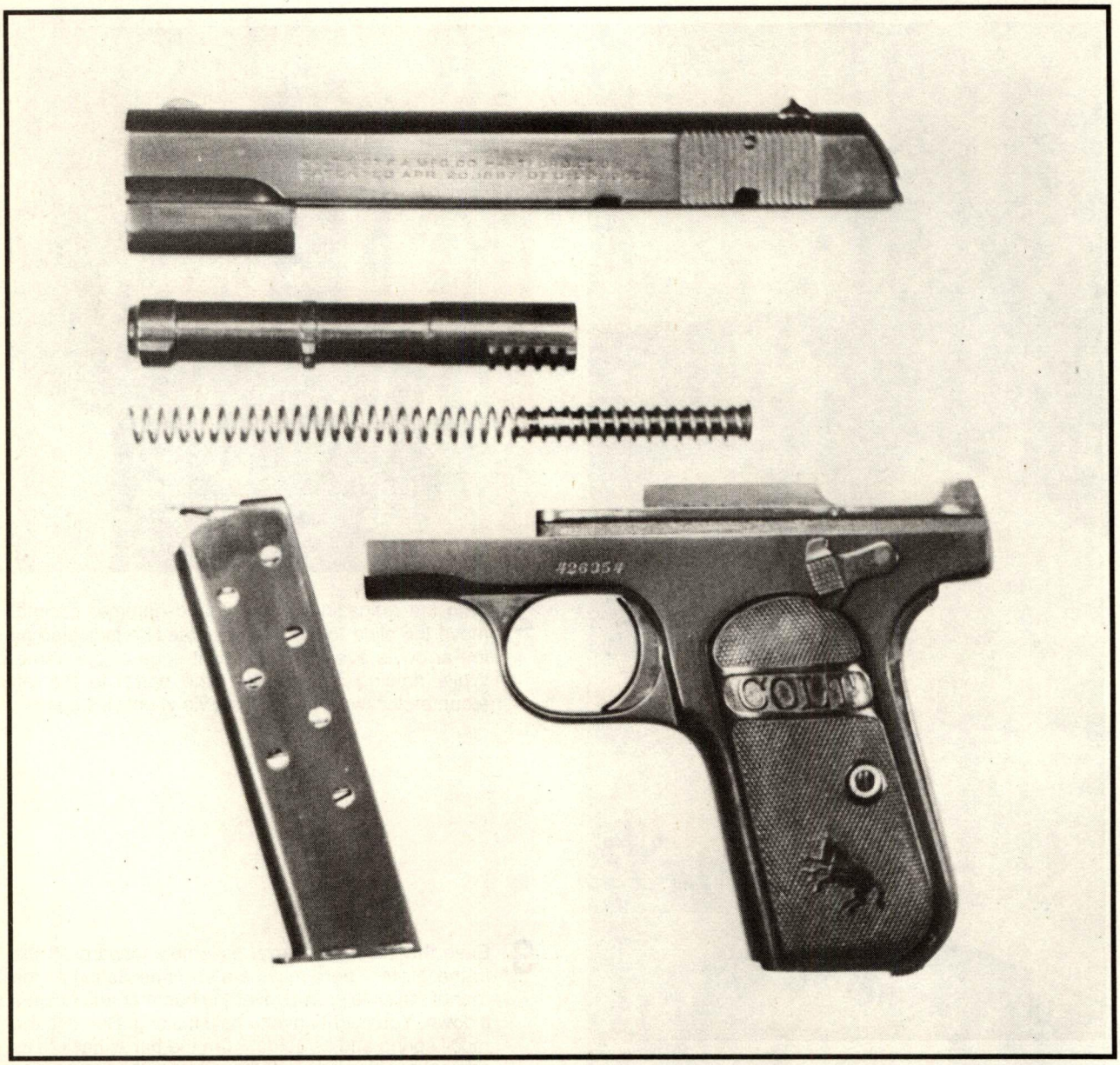




2. With the magazine removed and hammer cocked, move the slide to the rear until the line indicated by the arrow is even with the front edge of the frame. While holding it there, turn the barrel to the left (counterclockwise from a front view) until it stops.



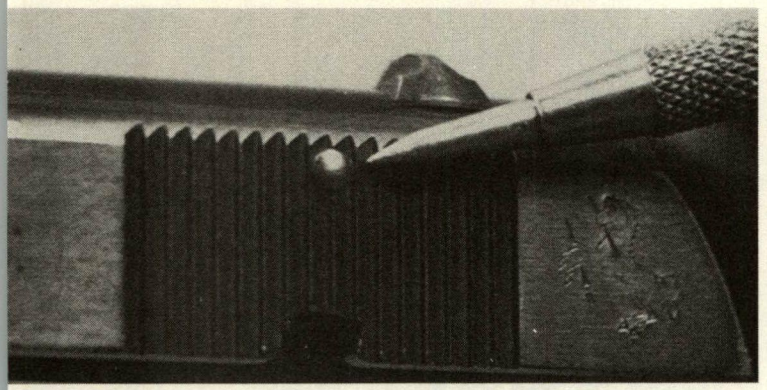
3. Ease the slide and barrel assembly forward off the frame. **Note:** There may be a slight hesitation as the rear of the slide passes over the hammer and pushes it down. You might have to help it along. Remove the recoil spring and its guide. Turn the barrel back to its original position and withdraw it from the front of the slide. **Gun is now field-stripped.**



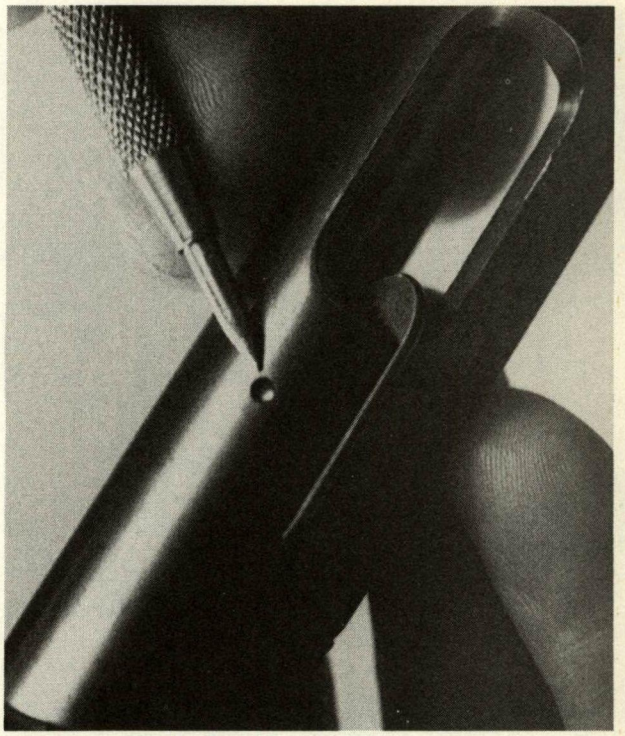
Colt Pocket Auto field-stripped

Detail Strip:

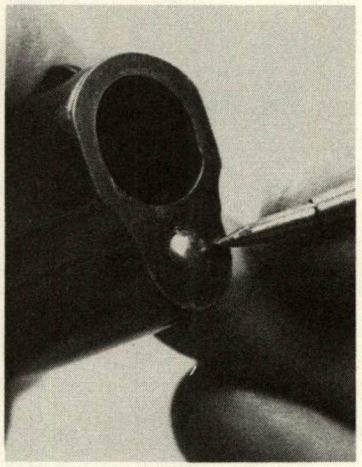
4. The firing pin system is retained by a cross-pin located at the top center of the slide serrations. Note that there are three parts in this system—the return spring, front section (the true firing pin), and rear section.



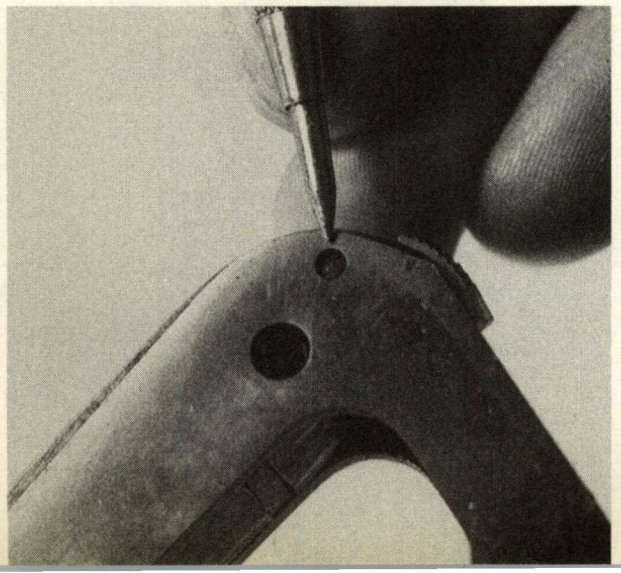
5. The extractor and its spring are retained by a vertical pin in the slide.



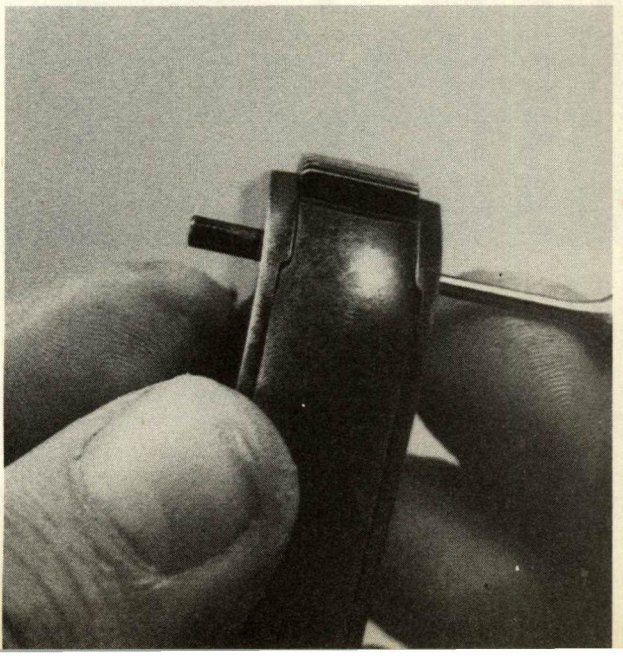
6. The slide end plug is driven toward the rear for removal.



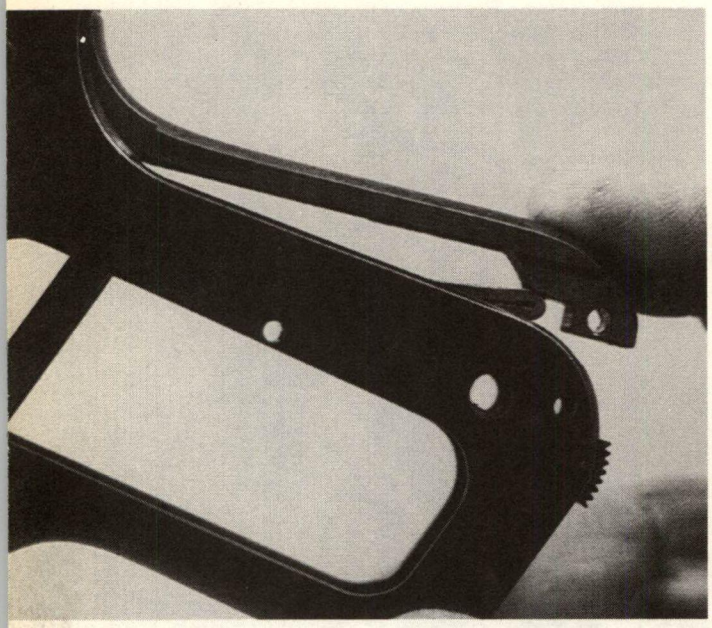
7. The grip safety pin is located at the lower rear edge of the grip frame.

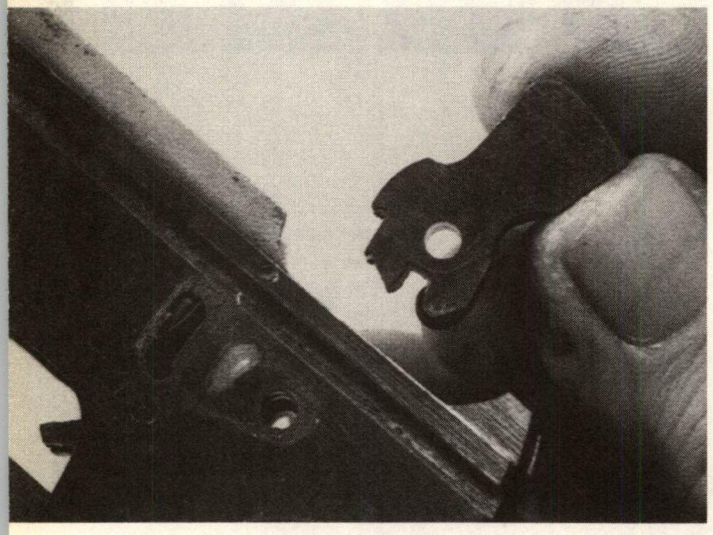


8. With a drift punch of the proper size, drive out the grip safety pin.



9. This will release the grip safety to swing outward, but it is not yet removable, as its upper front projections are engaged with corresponding surfaces at the rear of the sear. The hammer/grip safety spring, sear/disconnector spring, and the magazine catch can be removed at this point, but I prefer to leave them in place until the hammer and safety-lever are removed and the grip safety taken off.

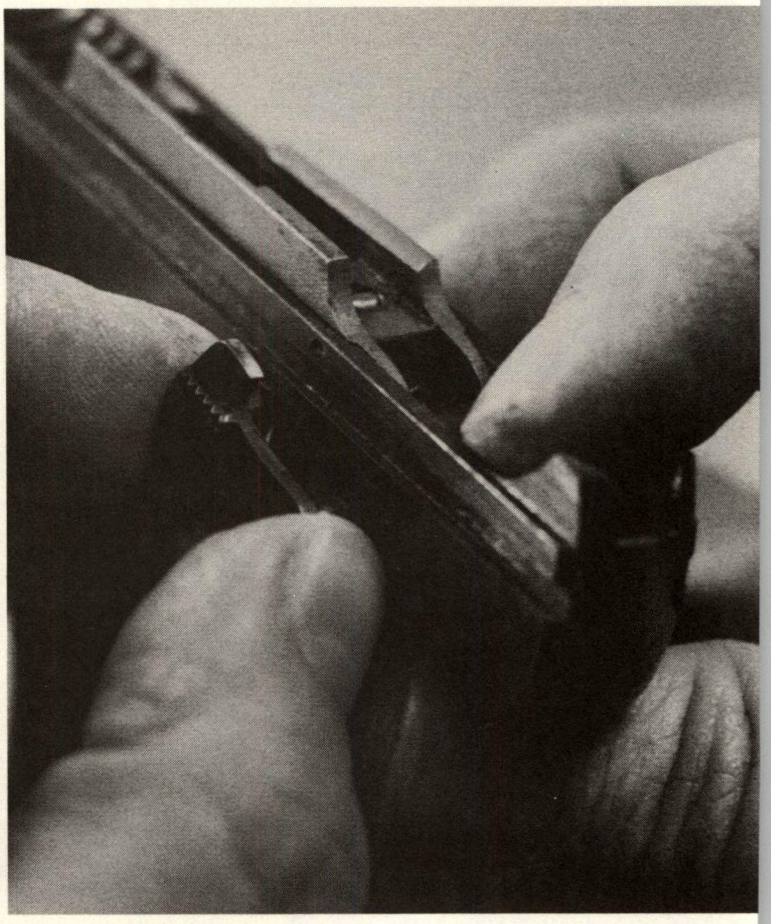


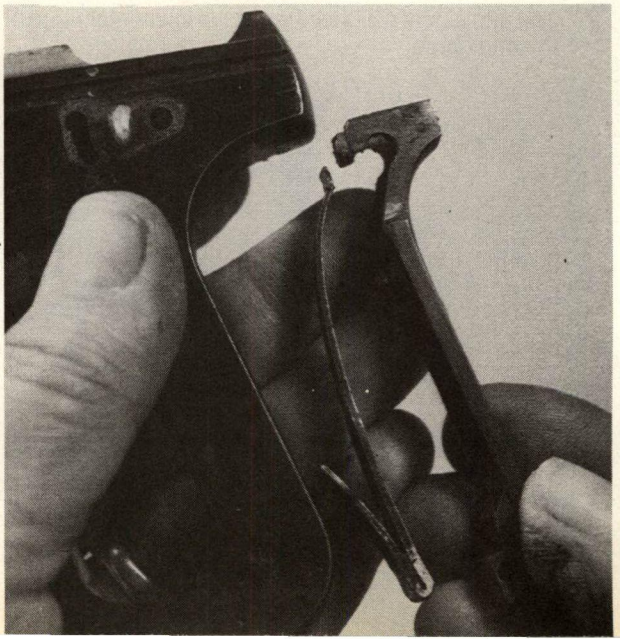


11. Remove the hammer from the top of the frame.

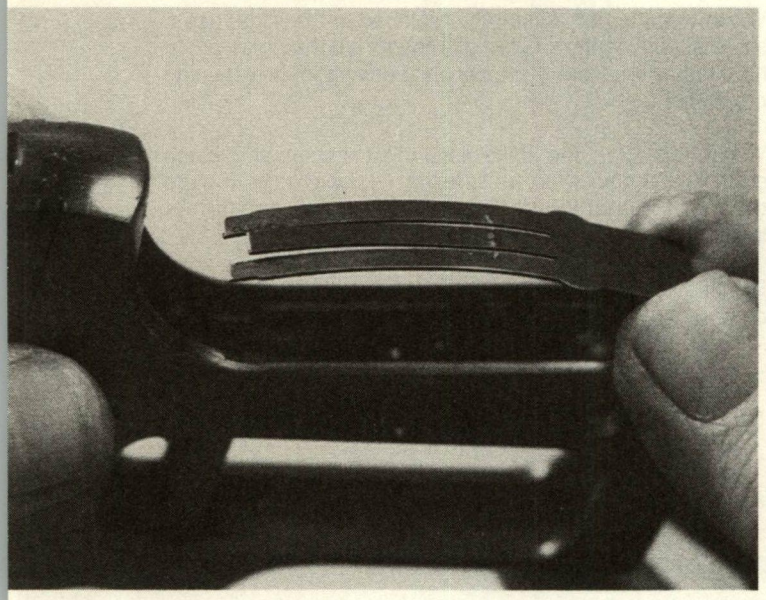
12. The sear will now tip far enough back to release the grip safety for removal, along with the heavy spring which powers the hammer and grip safety.

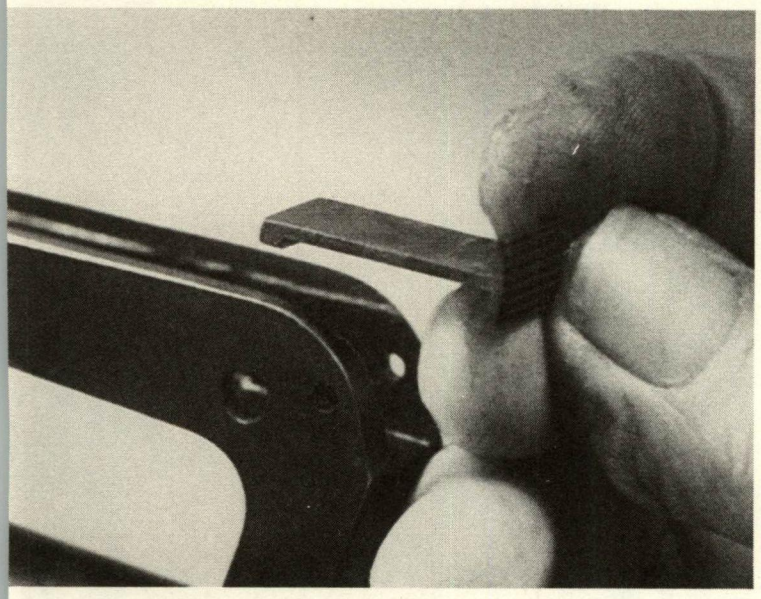
10. With the lower end of the grip safety swung out, the tension of the hammer spring is reduced, but the hammer should be restrained with a fingertip for the next operation. Turn the safety up to the on-safe position and pull it out toward the left. The safety cross-shaft is also the hammer pivot, and the hammer will be released as the safety is removed.



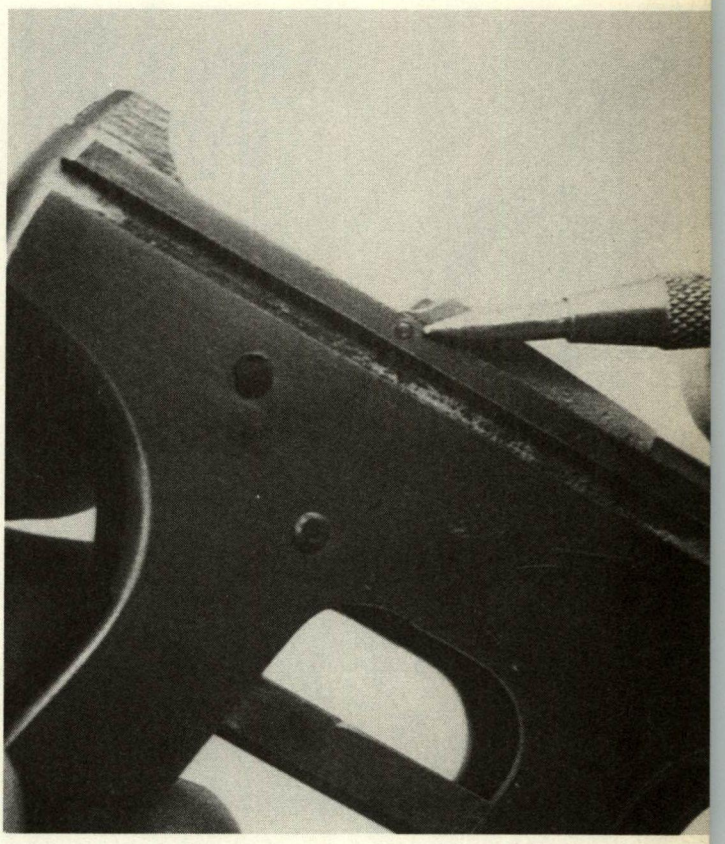


13. The combination spring which powers the sear, disconnector, and magazine catch can now be removed from the back of the grip frame.





14. The magazine catch can now be removed from the back of the grip frame.



15. The cross-pin forward of, and slightly below, the hammer pivot hole in the frame is now driven out to release the sear and disconnector for removal. The very small pin at the top of the frame retains the ejector/cartridge guide, and this is removed from the top of the frame.

16. When the sear and disconnector (not pictured) are removed, the trigger can be slid straight toward the rear and out of the frame.

Reassembly Tips:

When the firing pin system is replaced in the slide, use a slave pin of slightly smaller diameter than the cross-pin to hold the rear section in place while driving in the retaining cross-pin.

When replacing the sear/disconnector/magazine catch spring in the backstrap, be sure that its upper arms engage the rear faces of the sear and disconnector, and that its lower end is behind the magazine catch.

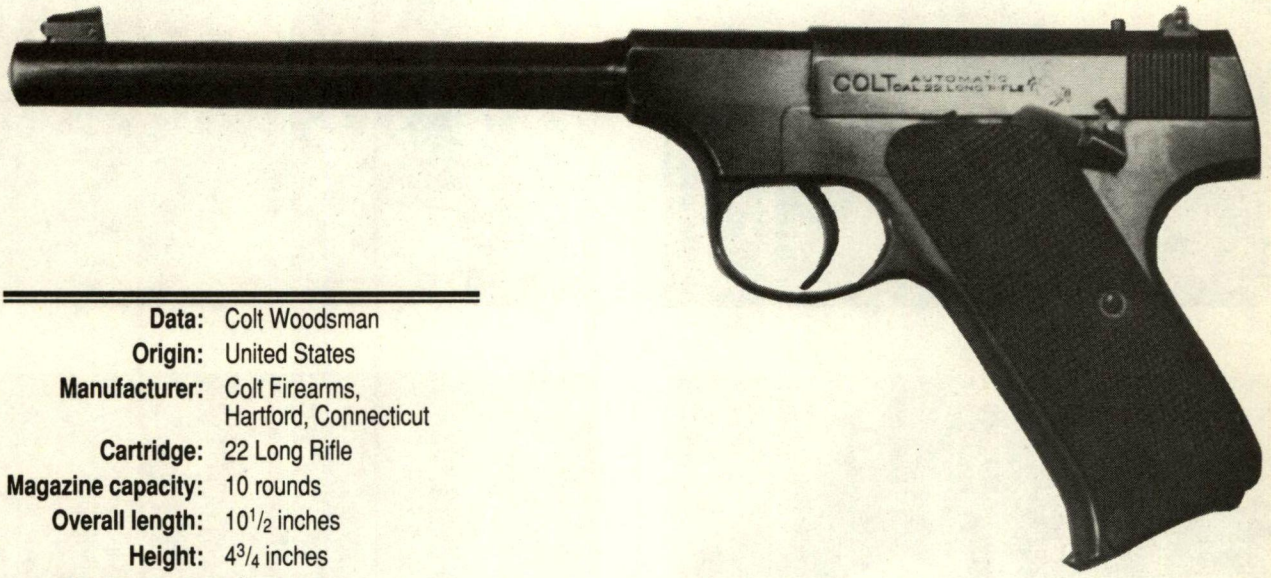
Be sure that the retaining lip at the top of the magazine catch is in its rectangular opening in the frame.

Colt Woodsman

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Colt Woodsman also apply to the following guns.

Colt Challenger
Colt Huntsman
Colt Match Target
Colt Targetsman
Colt Woodsman (first issue)
Colt Woodsman (second issue)
Colt Woodsman (third issue)
Colt Woodsman Sport (first issue)
Colt Woodsman Sport (second issue)
Colt Woodsman Target

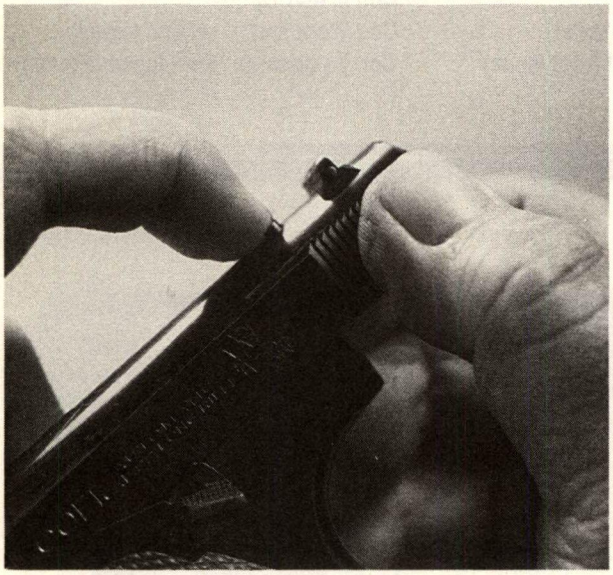


Data:	Colt Woodsman
Origin:	United States
Manufacturer:	Colt Firearms, Hartford, Connecticut
Cartridge:	22 Long Rifle
Magazine capacity:	10 rounds
Overall length:	10 1/2 inches
Height:	4 3/4 inches
Barrel length:	6 1/2 inches
Weight:	28 ounces

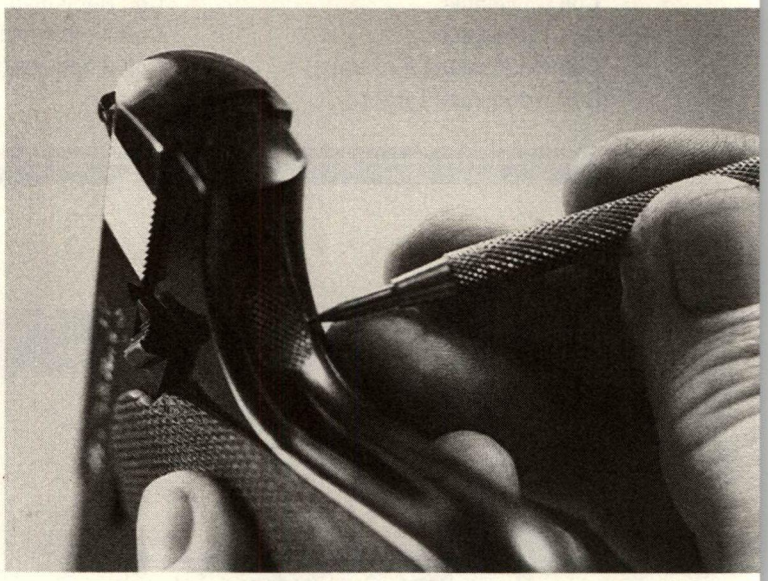
The pistol that became the Colt Woodsman began in 1915, and in 1927 the "Woodsman" name was officially adopted by Colt. In 1932, with serial number 83,790, a heat-treated mainspring housing was added, to make the gun safe with modern high-velocity loads. The gun was slightly redesigned in 1948, and the main change that relates to takedown was an extractor that is removed by gripping its beak with pliers, rotating it downward, and pulling it out toward the front. A slide-latch was also added, but it will present no difficulty in takedown. The original Woodsman was made in Sport and Target versions, and the later production used the names Huntsman, Challenger, and Targetsman. With some small variations, the instructions for the basic original Woodsman will apply.

Field Strip:

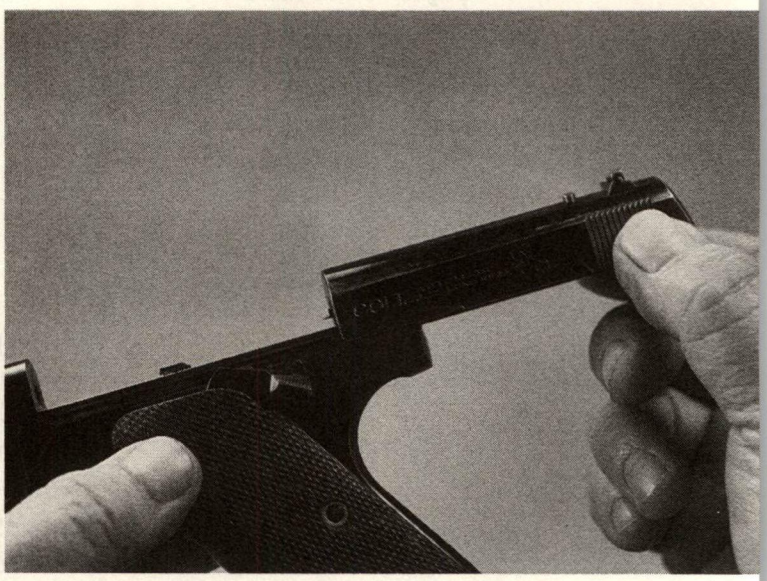
1. With the magazine removed, pull the slide all the way to the rear, depress the small button on top, and ease the slide forward. When the recoil spring catch is properly engaged, the slide will have no spring tension. The engagement can also be checked by looking inside the underside of the slide at the rear.



2. The mainspring housing that forms the rear of the grip frame has an oblong checkered area in its upper curve that denotes the pressure point for takedown. Note that in later versions, the grips must be taken off at this point, and the housing lock pin, near the curve of the backstrap, must be pushed out.



3. Press in and upward on the area noted above, and the lower end of the housing will spring out, as shown. Pulling the trigger to drop the hammer will make this easier. Remove the housing downward.

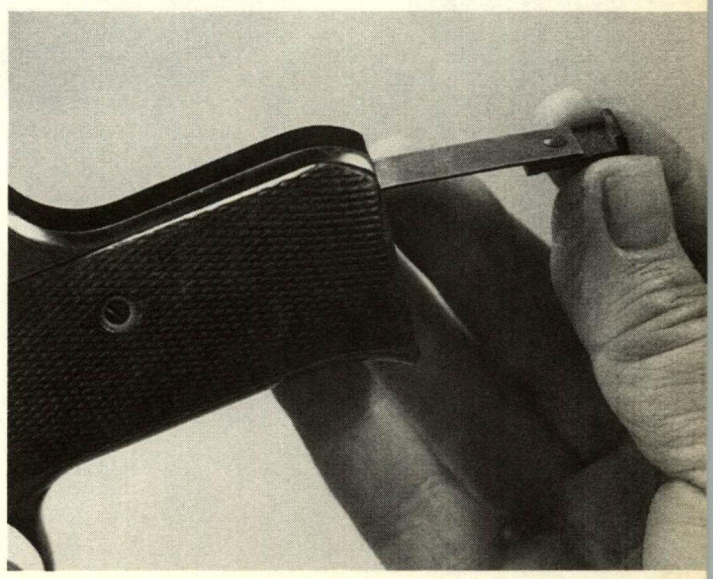


4. The slide may now be taken off the frame toward the rear. **Gun is now field-stripped.**

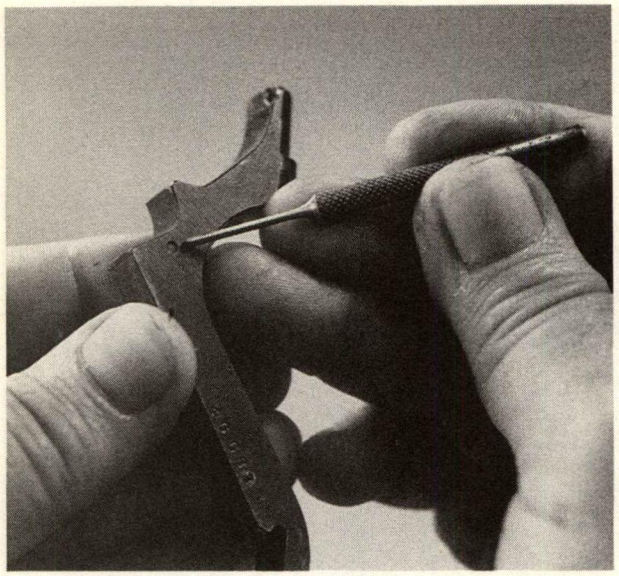
Colt Woodsman, field-stripped

Detail Strip:

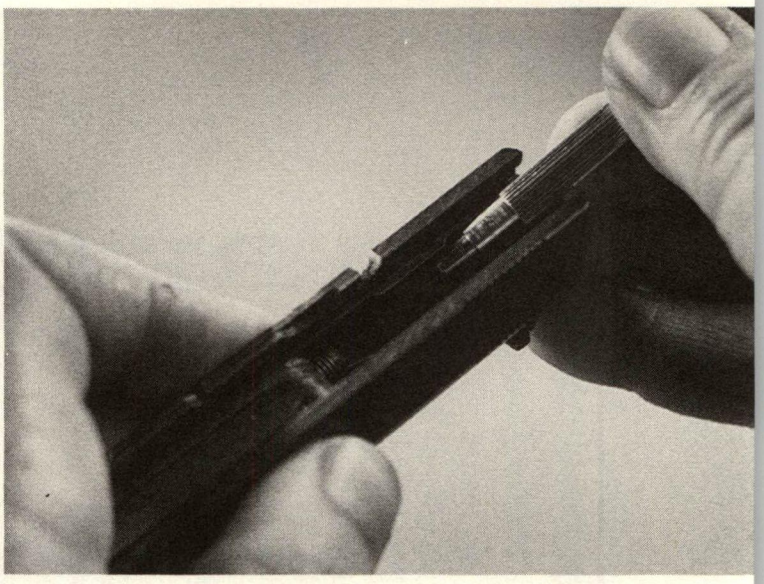
5. The magazine catch and the attached combination magazine catch and sear spring can now be removed downward. The magazine catch is riveted to the lower end of the spring. In normal takedown, these parts should not be separated.

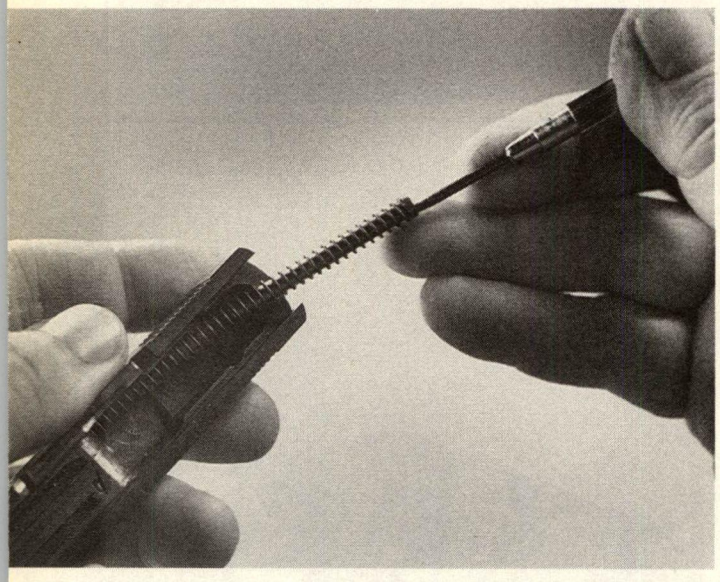


6. The hammer spring and its plunger can be removed from the housing by driving or pushing out the small cross-pin near the top of the housing. If removal is necessary, the best method is to grip the housing in a padded vise, slightly depress the plunger, and push out the pin. **Caution:** *The spring is compressed. Control it, and ease it out.*

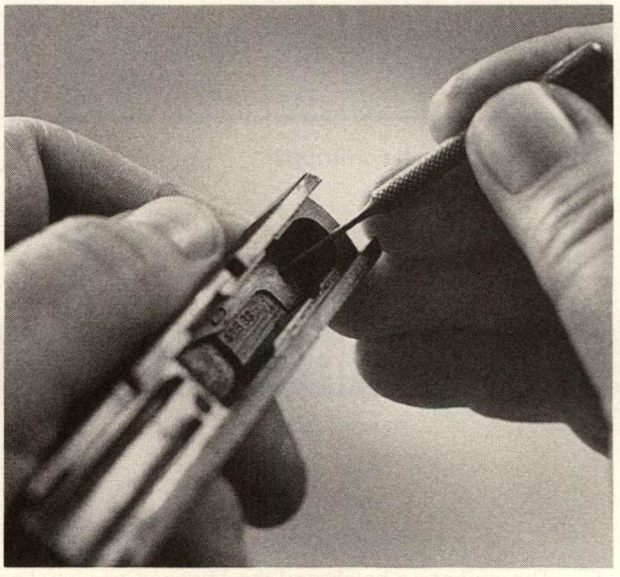


7. Insert a small tool in the underside of the slide and depress the recoil spring plunger forward, to release the plunger and spring from the catch. **Caution:** *Control the compressed spring, and ease it toward the rear.*



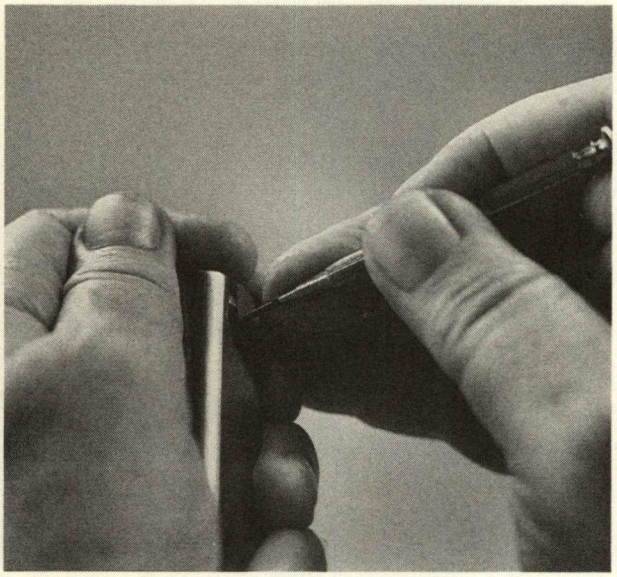


8. As the spring and plunger are eased out, tip them inward, and remove them toward the rear.

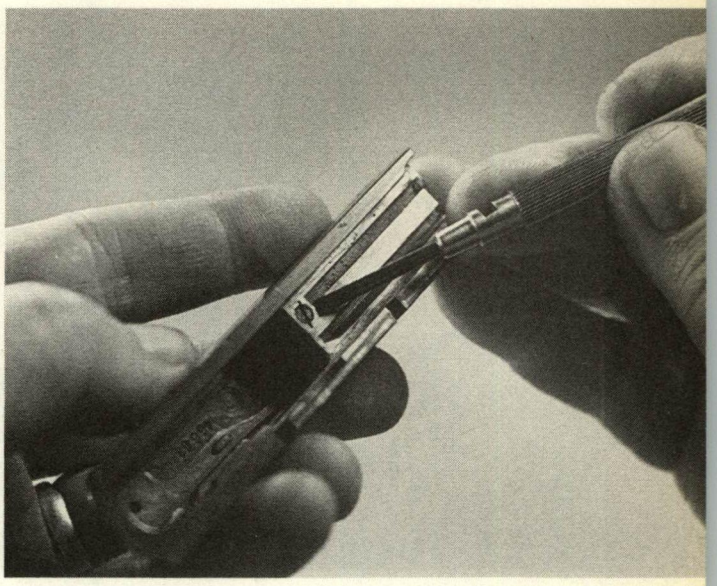


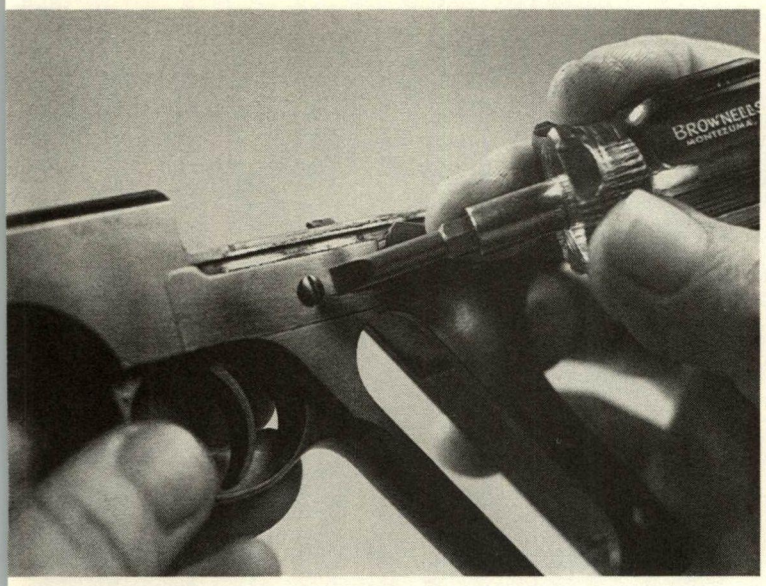
9. The recoil spring catch may be removed by inserting a tool in the hole at its rear, and sliding it forward until its flanges align with the exit cuts in the slide. The button is then removed downward. If necessary, the rear sight may be drifted out of its dovetail toward the right with a non-marring tool. Separating the adjustment screw and leaf from the base is possible, but not advisable.

10. There is an access hole behind the extractor opening, and it is possible to insert a small tool to hold the depressed plunger while the extractor is removed or replaced. However, the extractor is easily taken out by simply inserting a small screwdriver between the extractor and the plunger, depressing the plunger, and tipping the extractor out toward the front. Caution: Control the plunger and spring, and ease them out.



11. The firing pin is retained by a screw in the underside of the slide. This is usually staked in place, and removal should be done only for repair. Taking out the screw will allow the firing pin and its spring to be taken out toward the rear.

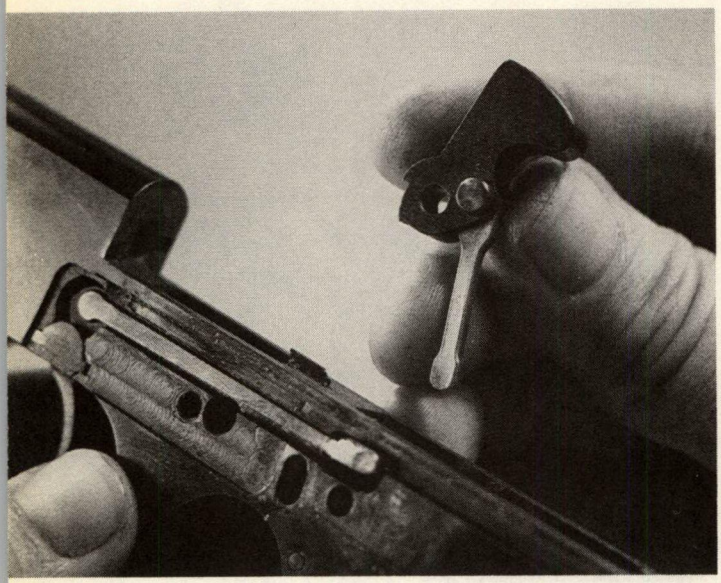




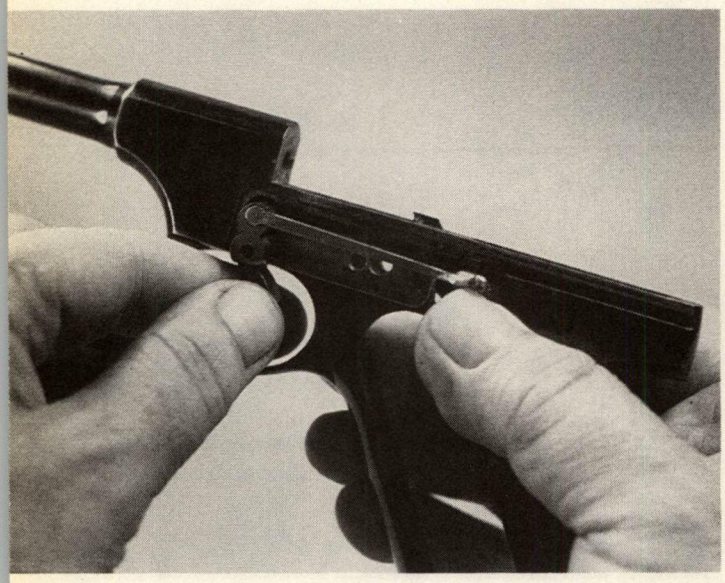
12. Remove the sideplate screw on the left side of the frame, and lift off the sideplate.

13. Remove the safety catch toward the left.

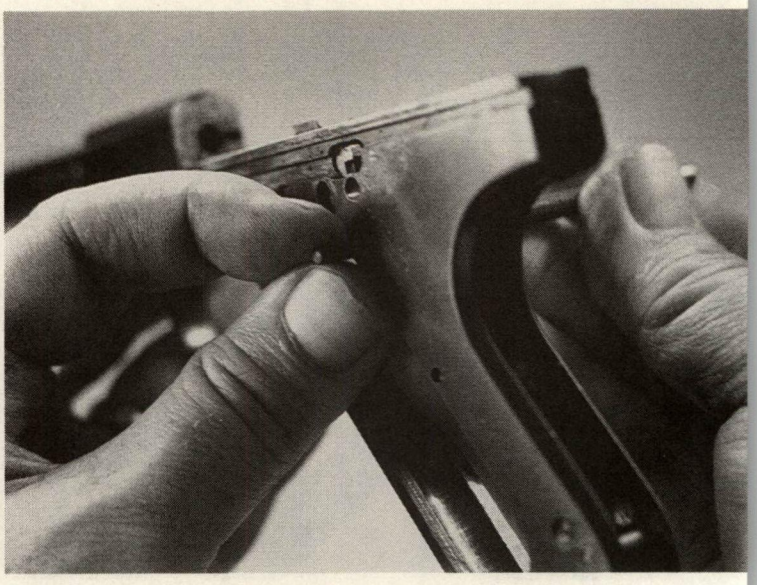
14. Remove the hammer upward. The strut is easily separated from the hammer by taking out the pivot pin toward the left.



15. The trigger pivot may be nudged out toward the left, or it may be pushed from the right side of the gun.

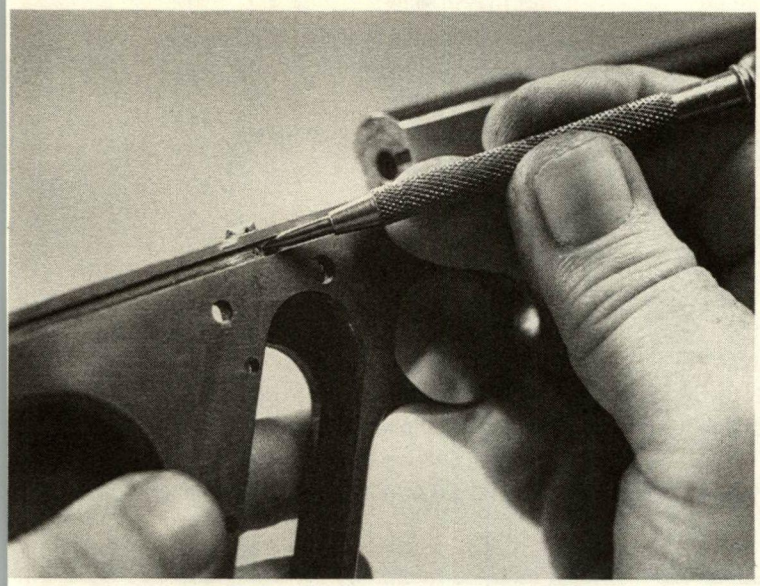


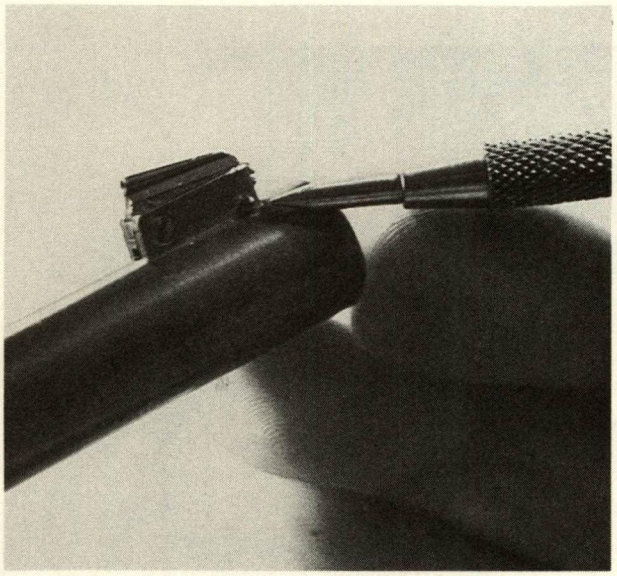
16. Remove the trigger and trigger bar assembly toward the left. The torsion-type trigger spring will be released into the trigger well—be sure it isn't overlooked and lost.



17. Push out the sear pivot pin toward the left, and remove the sear from inside the frame.

18. A single cross-pin retains the ejector in the frame. If removal is necessary, there is an access hole inside the frame to allow driving the ejector out upward.

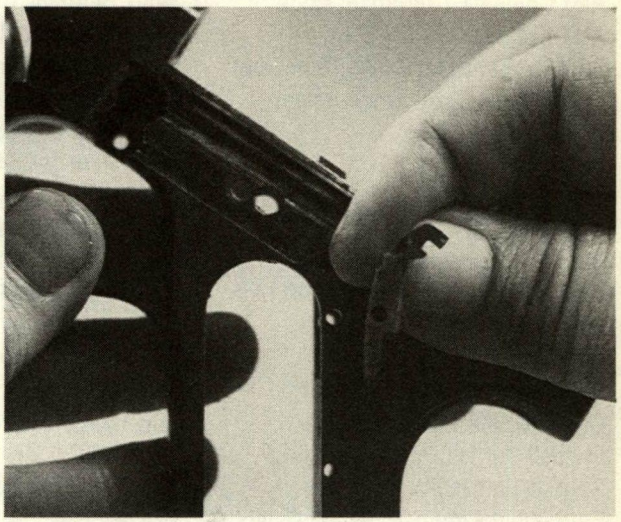


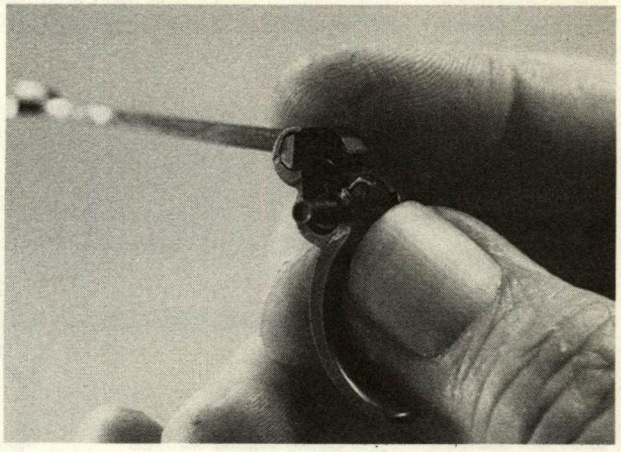


19. To remove the front sight blade, it is necessary to drift out the small cross-pin at the front, and take out the front adjustment screw and the limit cross-screw at the rear. Take care that the small coil spring under the sight blade is not lost.

Reassembly Tips:

1. The sear is shown here, outside the frame, in the proper orientation for re-insertion.





2. The trigger assembly, with the spring, pivot, and trigger bar, is shown here in the proper arrangement for reinsertion. Note that one end of the spring must bear on the bar pivot, and the other extends forward to power the trigger. When inserting the trigger assembly, use a tool to lift the front tip of the spring as the pivot is pushed into place.

When inserting the combination magazine catch and sear spring, be sure the upper tip rests on the sear, with the hammer strut behind it.

When reinstalling the recoil spring, insert a fingertip beside its tunnel in the slide, to prevent kinking of the spring as the plunger and spring are pushed into place. Holding the plunger with a tool, depress the catch button and engage the catch tip with the end of the plunger.

Colt 1911 Series

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Colt 1911 also apply to the following guns.

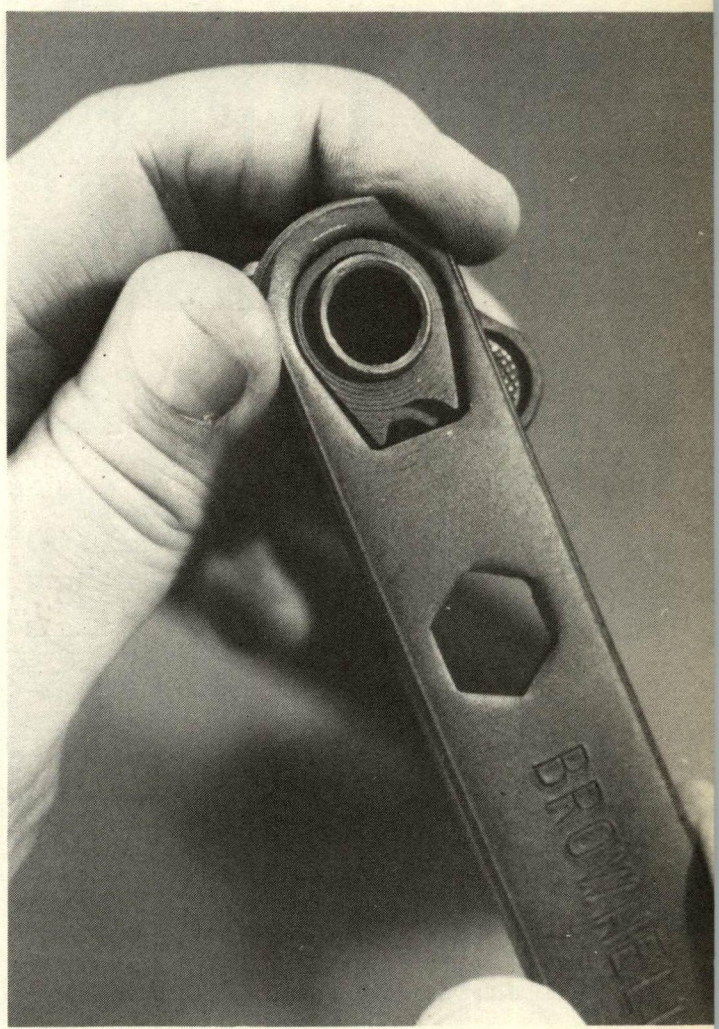
AMT Combat Government Model
AMT Hardballer
AMT Long Slide
AMT Skipper
Argentine Model 1927
Auto-Ordnance M1911A1 Pit Bull
Auto-Ordnance M1911A1 Thompson
Colt Combat Commander
Colt Combat Elite
Colt Combat Grade Government
Colt Commander
Colt Delta Elite
Colt Gold Cup
Colt Gold Cup 38 Special
Colt Lightweight Commander
Colt Mark IV Series 70
Colt Mark IV Series 80
Colt Model 1911
Colt Model 1911A1
Colt National Match 45
Colt Officers ACP
Colt Super 38
Detonics Combat Master Mk. I
Detonics Combat Master Mk. VI
Detonics Scoremaster
Essex Model 1911A1
Falcon Portsider
Federal Ordnance Ranger M1911A1
Llama Model IIIA
Llama Model VIII
Llama Model IXA
Llama Model XA
Llama Model XI
Llama Model XV
M-S Safari Arms Enforcer
M-S Safari Arms Model 81
M-S Safari Arms Model 81 BD
M-S Safari Arms Model 81 BP Super
M-S Safari Arms Model 81NM
Olympic/Safari Arms Enforcer
Olympic/Safari Arms Matchmaster
Randall Compact Service Model
Randall Curtis LeMay Four Star
Randall Raider
Randall Service Model
Springfield Armory M1911A1
Springfield Armory M1911A1 Commander
Springfield Armory M1911A1 Compact
Springfield Armory M1911A1 Defender
Vega 45

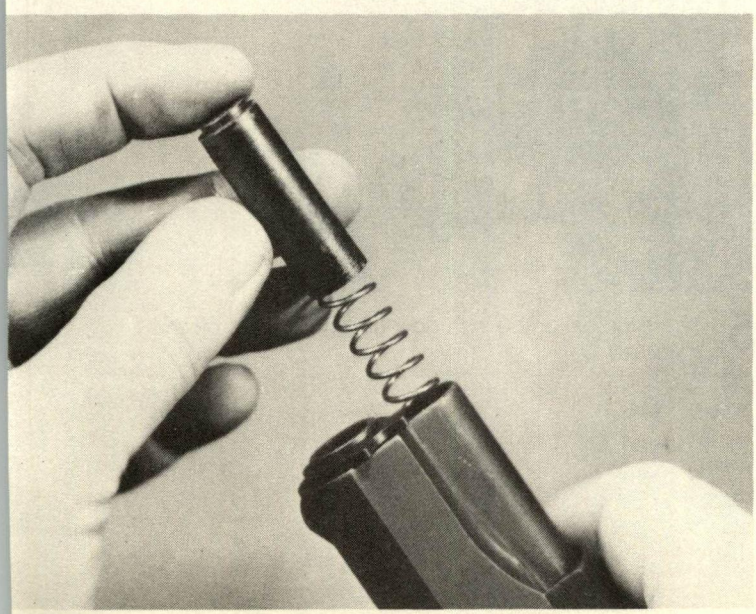
Data:	Colt Model 1911
Origin:	United States
Manufacturer:	Colt Firearms, Hartford,Connecticut
Cartridge:	45 ACP, 38 Super, 9mm Luger
Magazine capacity:	45—7 rounds, 38/9mm—9 rounds
Overall length:	$8\frac{3}{8}$ inches, (Commander—8 inches)
Height:	$5\frac{3}{8}$ inches
Barrel length:	5 inches (Commander—$4\frac{1}{4}$ inches)
Weight:	40 ounces (Commander—36 ounces)

Our standard military pistol from 1911 to 1985, the Colt 45 Auto is so well known that it really needs no comment or background data here. The target model, the Gold Cup, has one or two small differences in the internal mechanism. The Series 80 versions have an added firing pin block safety system, consisting of a lever in the frame and a plunger and spring in the slide. These are not complicated, and should cause no takedown problems. The old Government Model has also been copied many times over the years, and the instructions will generally apply to all of these.

Field Strip:

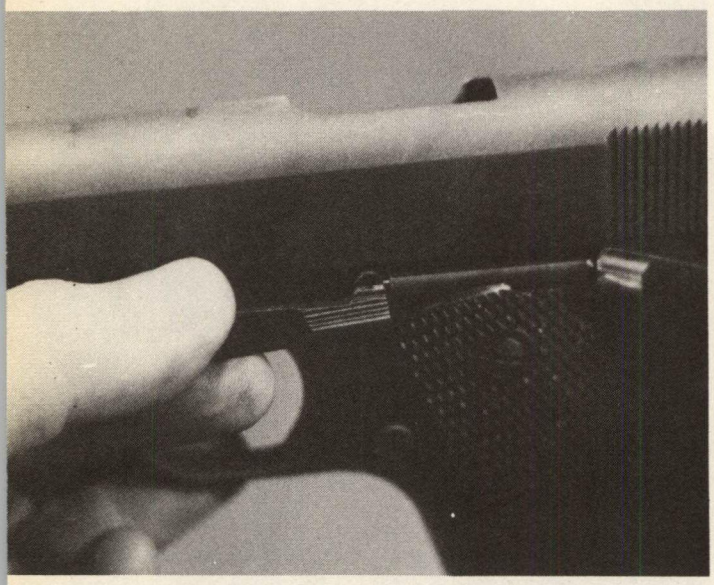
1. With the magazine removed and the hammer down, depress the checkered button below the barrel and turn the barrel bushing toward the right side of the gun until the plug and recoil spring are free to come out. **Caution:** *The recoil spring is under tension, so keep strong pressure on the checkered end of the plug and ease it out.* The barrel bushing can ordinarily be turned easily with the fingers, but on some tight older guns, and especially on the new Mark IV Series 70 guns with the barrel-gripping bushing, a special wrench may be necessary.



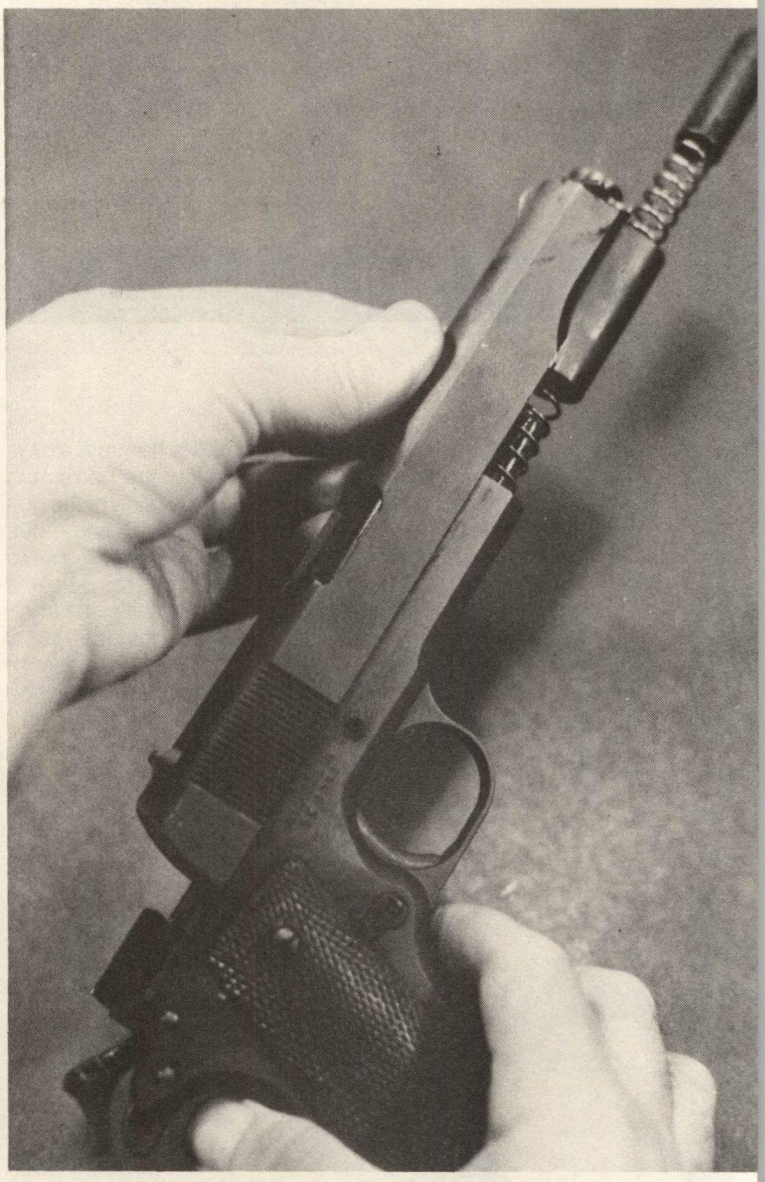


2. After easing out the plug, remove it from the end of the spring. In rare cases, it may be locked on by an internal tab, and a slight turn will be necessary to free it.

3. Cock the hammer, and move the slide back until the small semi-circular cut at its lower edge aligns with the top rear of the slide stop.

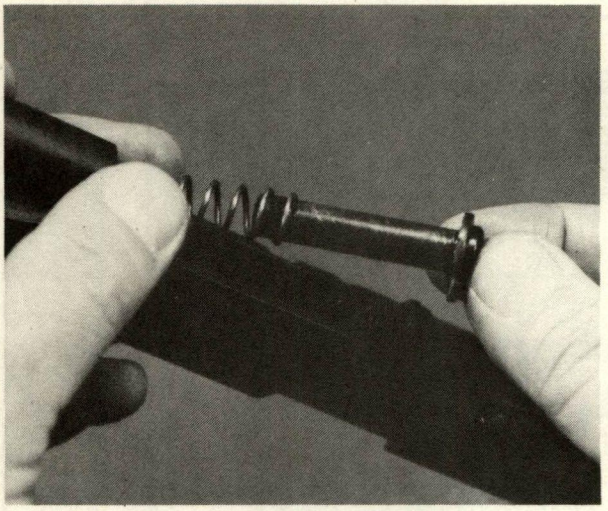


4. Push the end of the slide stop shaft, on the right side of the gun, and remove the slide stop from the left side.

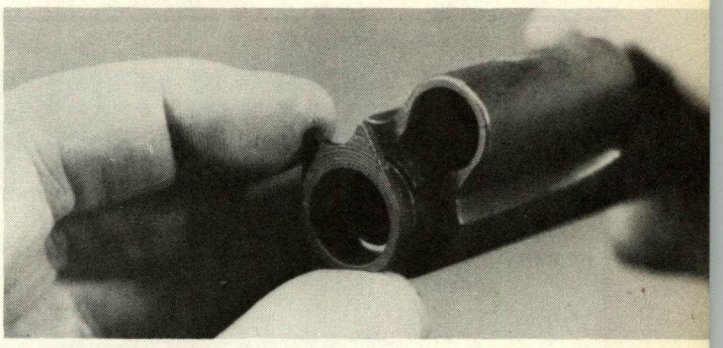


5. The slide assembly can now be run forward off the frame.

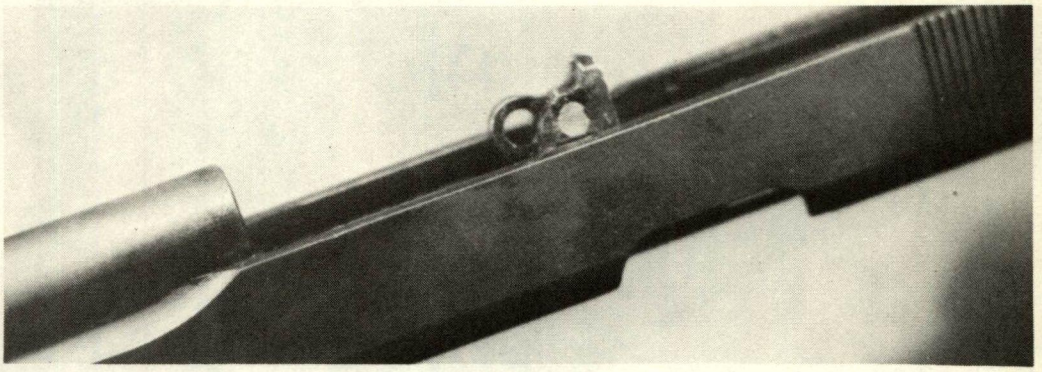
6. Remove the recoil spring and its guide from the slide, together or separately.

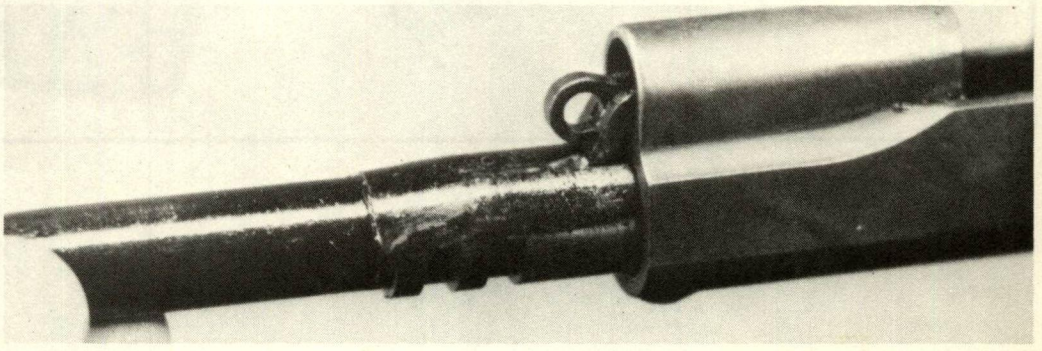


7. Turn the barrel bushing back toward the left side of the slide, until its lug aligns with the opening, and remove the bushing from the front of the slide.



8. Tip the barrel link over forward to clear the recoil spring tunnel.



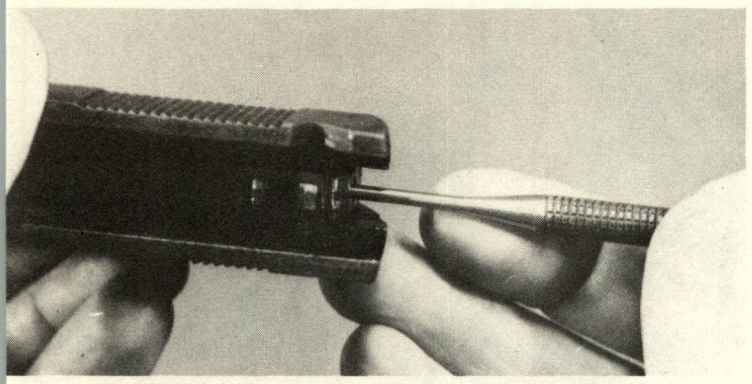


9. Remove the barrel from the front of the slide. **Gun is now field-stripped.**

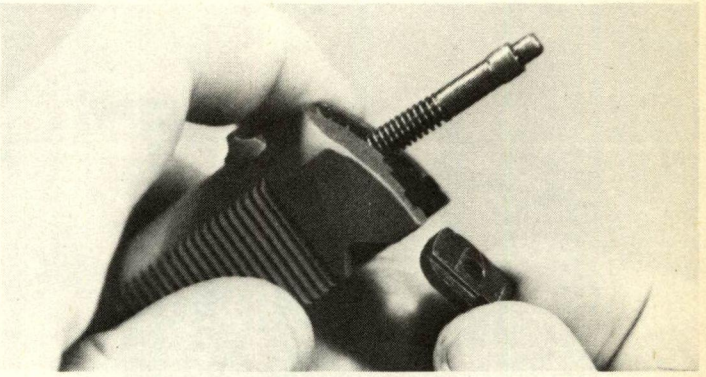
Colt Mk IV/Series 70 field-stripped

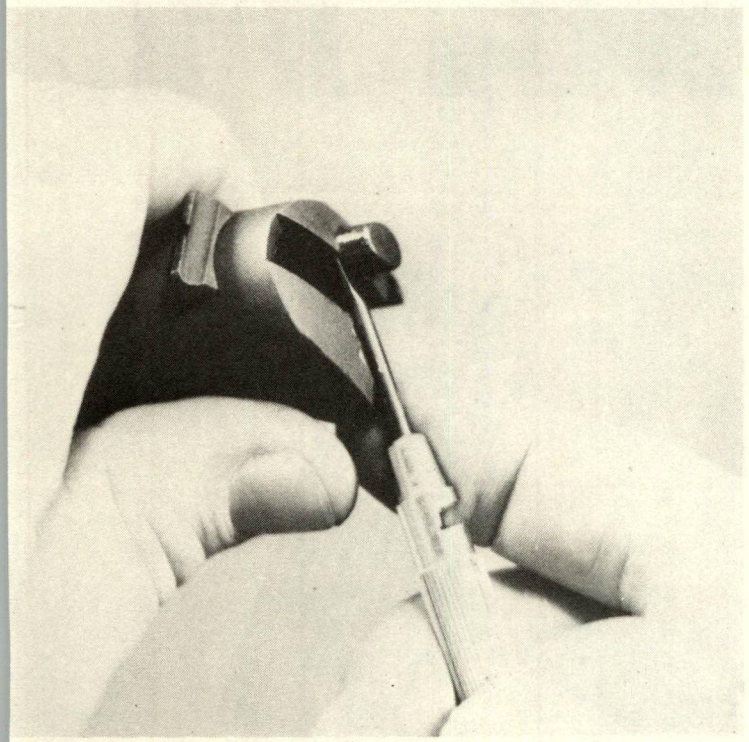
Detail Strip:

10. With a tool of appropriate size, depress the firing pin and slide the retainer downward to free the firing pin. **Caution:** *The firing pin spring is under some compression, and can eject the firing pin with force when the retainer is removed.*

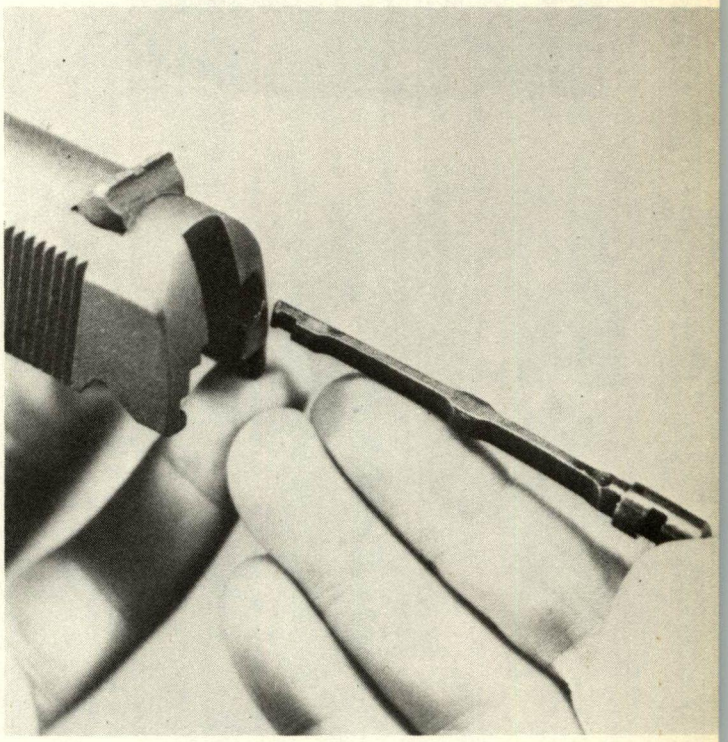


11. After the retainer plate is removed, the firing pin and its return spring can be taken out.



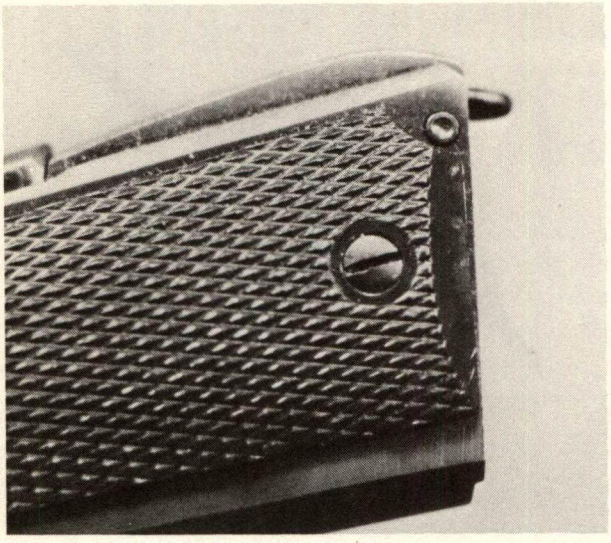


12. Removal of the firing pin retainer plate also frees the extractor. With a small screwdriver pry it gently out, straight to the rear of the slide.

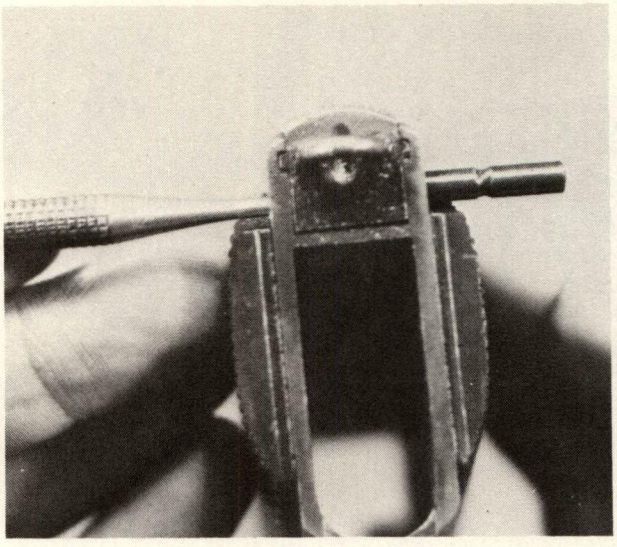


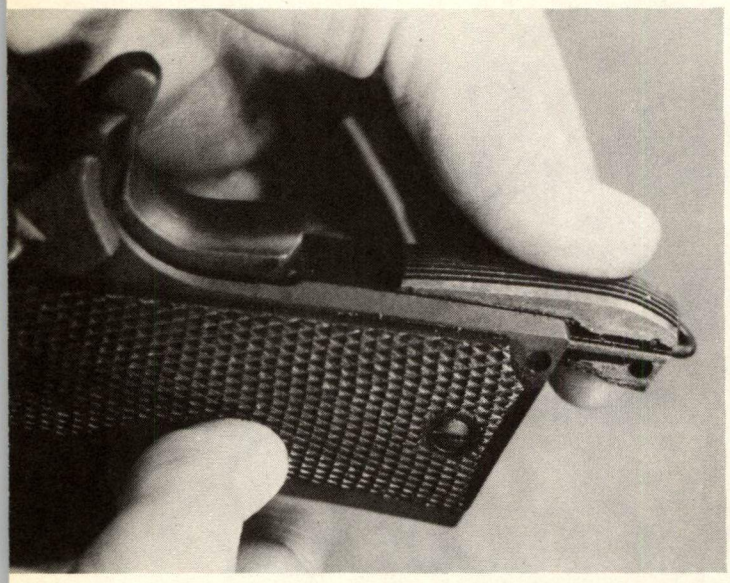
13. When the extractor is pried out past its round headpiece, it can be easily grasped with the fingers and removed from the slide. The rear sight can be drifted out of its dovetail slot from left to right.

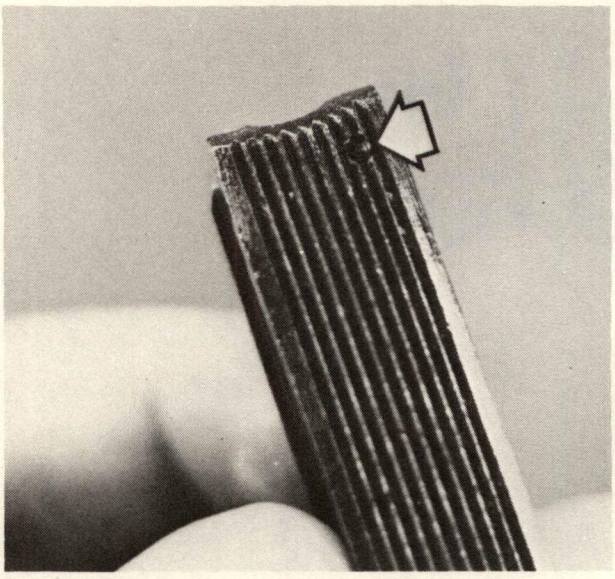
14. The initial takedown key for the frame is the mainspring housing retaining pin, located at the lower rear edge of the grip frame.



15. With the hammer at rest, use a drift of the proper size to drive out the mainspring housing retainer pin.



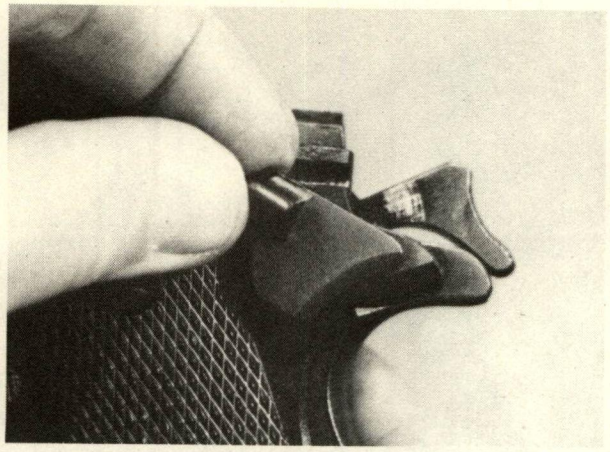




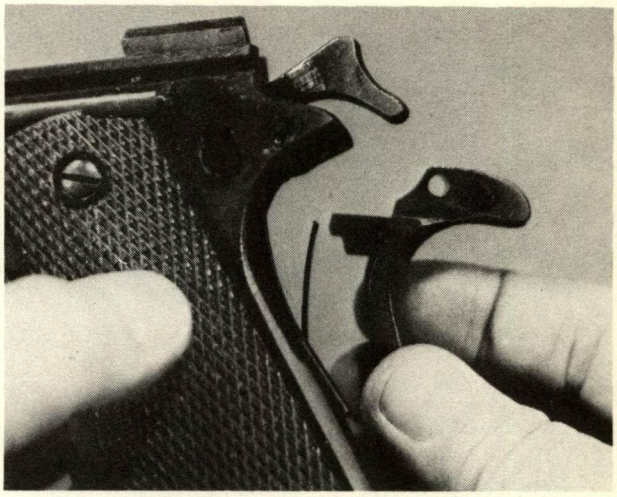
16. The mainspring housing can now be slid down off the frame. If it is tight, cocking the hammer will put pressure on it through the mainspring and help to ease it out.

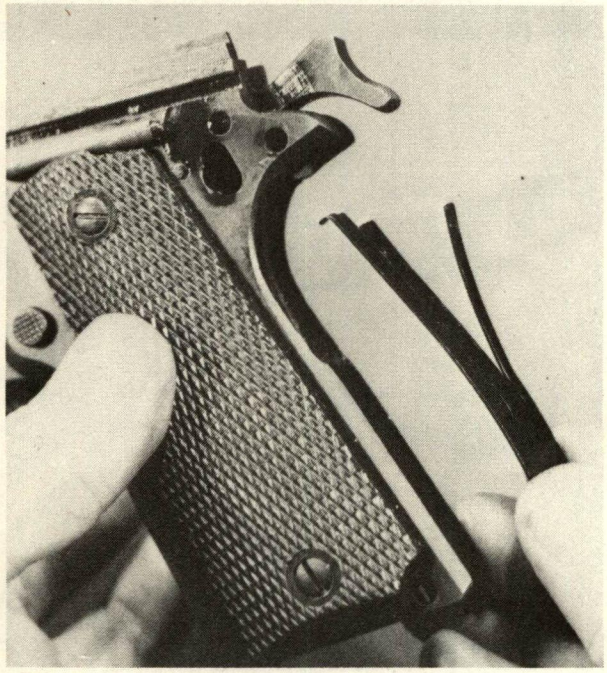
17. Viewing the mainspring housing from the rear, there is a small pin (arrow) at upper right which can be drifted out toward the inside to free the mainspring and its plunger. **Caution:** *The mainspring is under quite a bit of tension and can cause injury when released. Use a heavy shop cloth to catch it when driving out the pin.*

18. With the hammer cocked, move the safety almost to the on-safe position while exerting slight outward pressure toward the left. When its internal projection aligns with its cut in the frame, it can easily be taken out.

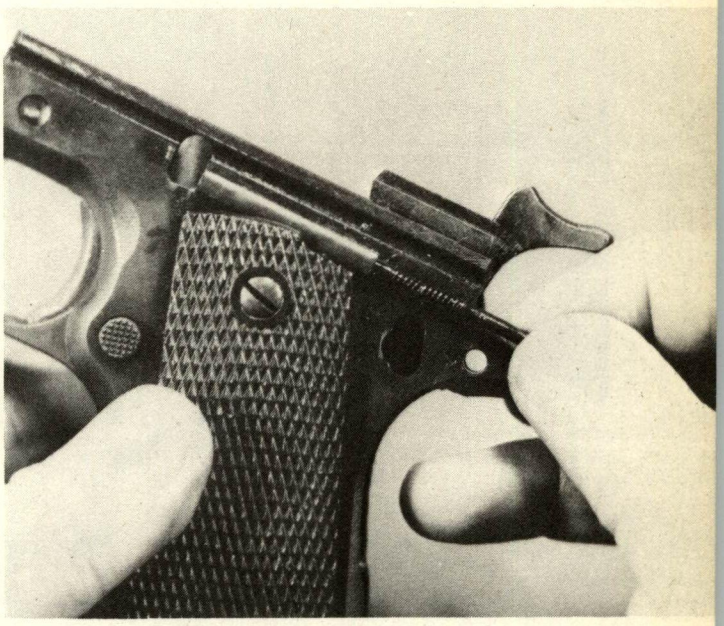


19. Removal of the safety frees the grip safety and this is now removed to the rear.



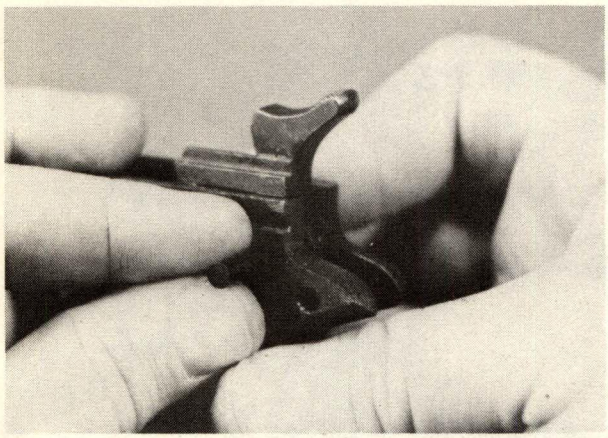


20. The combination leaf spring which powers the sear, trigger, disconnector, and grip safety can now be lifted out at the rear of the grip frame.

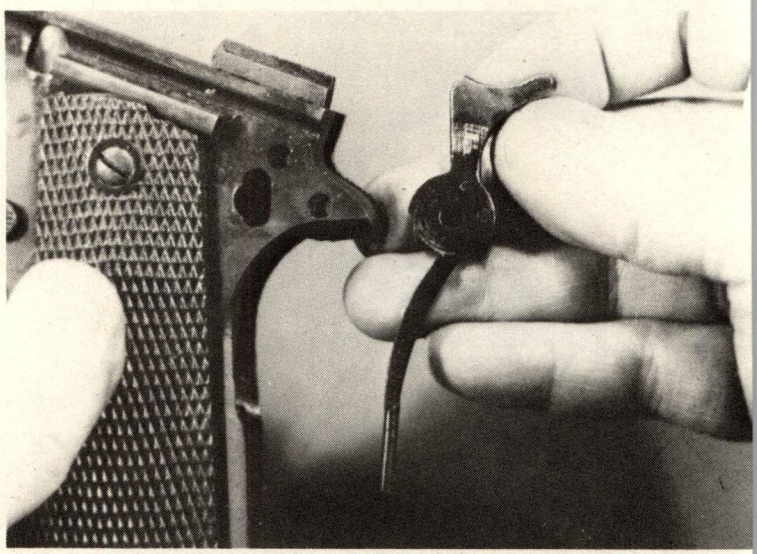


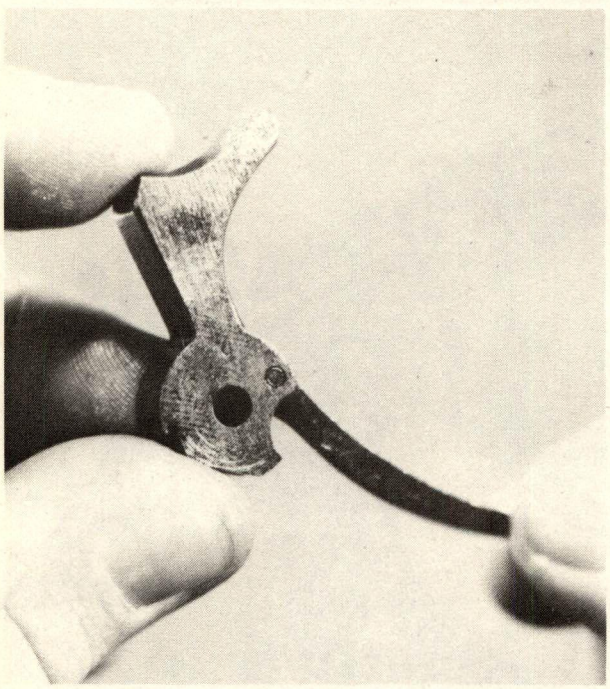
21. Pushed from the front with a drift of proper size, the spring and plungers which supply tension to the slide stop and manual safety can now be removed from the rear of its tunnel above the left grip. The spring tunnel is riveted in place inside the magazine well and it is difficult to remove and replace without special tools. Unless removal is absolutely necessary, it should be left in place.

22. Started from the right with a drift of the proper size, the hammer pin is removed from the left side of the grip frame.



23. The hammer can now be lifted out of the frame.

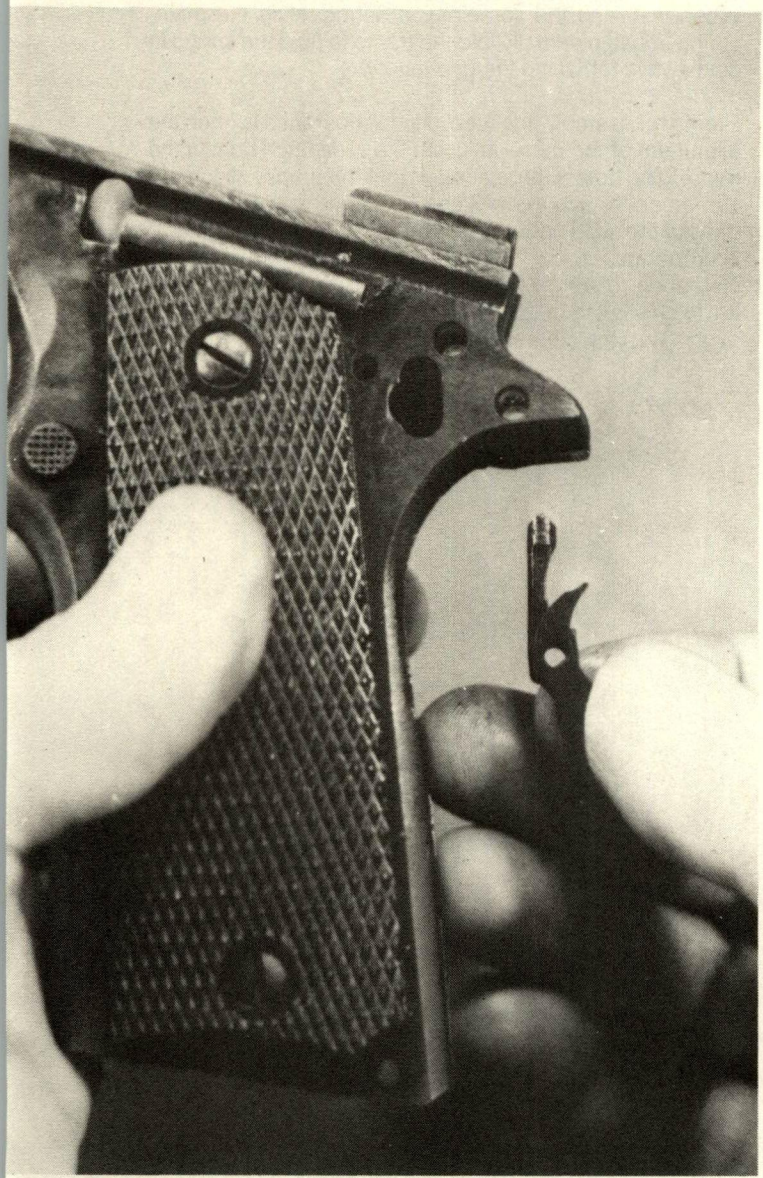




24. Removal of the small pin at lower rear of the hammer will free the hammer strut. Note the direction of its curve, and replace it in the same position.

25. Starting from the right side with a drift, remove the sear/disconnector pin from the left side.

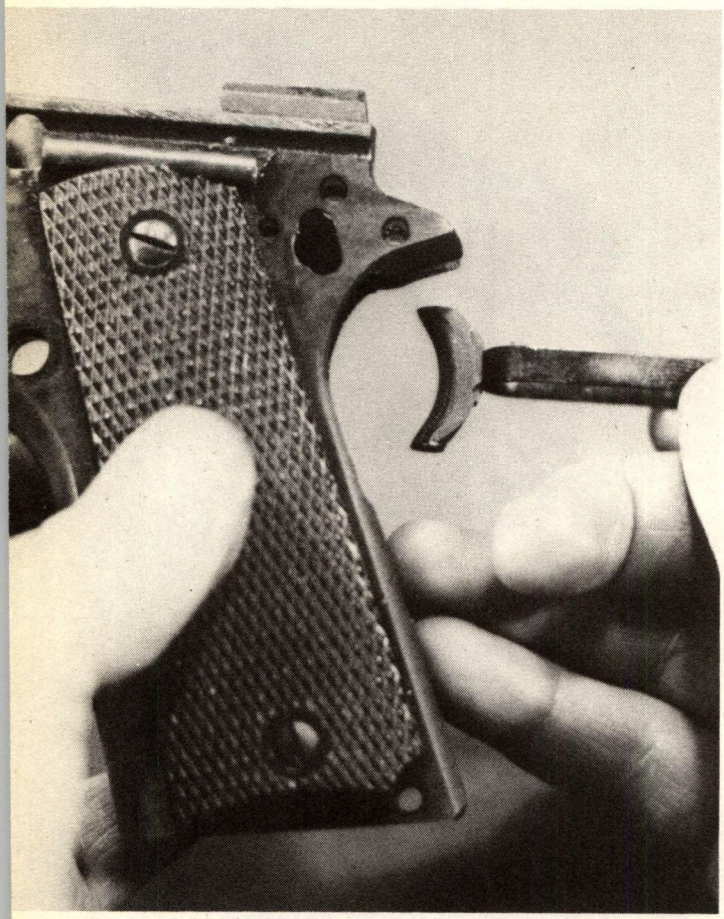
26. The sear and disconnector can now be removed from the rear of the frame. Note their relationship for proper reassembly.



27. With a small screwdriver, turn the slotted head of the magazine release retainer to the left, while keeping the magazine release depressed to the level shown.

28. With the retainer locked into its slot in the magazine release, the release can be taken out toward the right side of the gun. After removal, turning the retainer back to the right will free the retainer and its spring from the release body. These are small parts, so take care that they aren't lost.

29. After the magazine release is taken out, the trigger is free to be removed toward the rear of the frame. The grip screws can be taken out to free the grips.



Reassembly Tips:

When installing the combination spring, slide the mainspring housing partially into the frame to hold the spring in place while replacing the grip safety.

During reassembly, the most difficult operation is often the alignment of the barrel link with the slide latch hole in the frame. The hole is large enough that the proper alignment can be seen, and the link can be edged into position by moving the slide back and forth a very small distance until it drops into place. Don't try aligning the link and the clearance cut for the top of the latch at the same time. Get the latch shaft through the link, then swing the latch up and align it with the clearance cut.

Coonan Model B

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Coonan Model B also apply to the following gun.

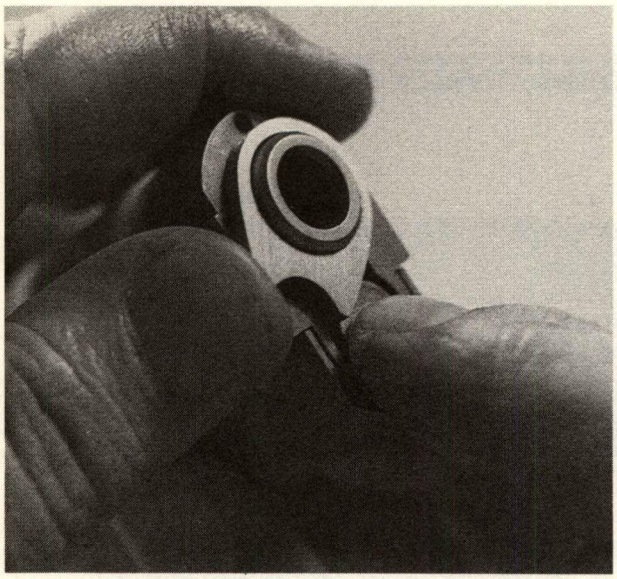
Coonan Model A

Data:	Coonan Model B
Origin:	United States
Manufacturer:	Coonan Arms, St. Paul, Minnesota
Cartridge:	357 Magnum
Magazine capacity:	7 rounds
Overall length:	8.3 inches
Height:	5.6 inches
Barrel length:	5.0 inches
Weight:	42 ounces

There was an earlier Coonan 357 Magnum automatic, but it was produced in very small quantity. Mechanically, the Model A is virtually the same as the current Model B, the one shown here, and the instructions will apply. The Coonan pistol is generally based on the old Colt Government Model pattern, but there are several unique points that are different. It is a beautifully-made gun, and one of the few automatic pistols chambered for the 357 Magnum revolver cartridge.

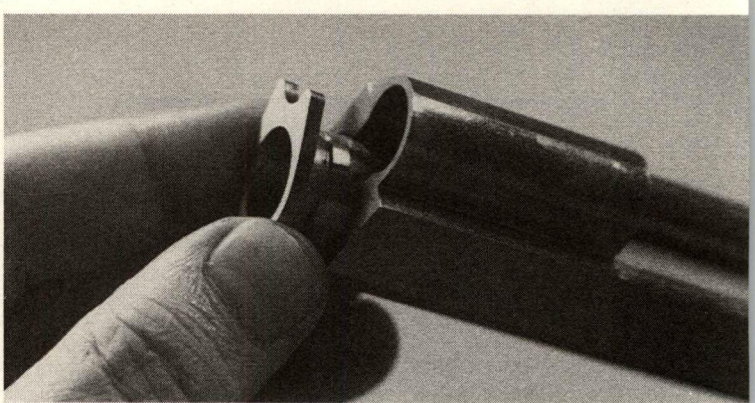
Field Strip:

1. With the magazine removed and the hammer at rest, depress the recoil spring plunger and turn the muzzle bushing clockwise (front view) until it stops. **Caution:** *The recoil spring is under tension, and it is powerful. Control the plunger, and ease it out.*



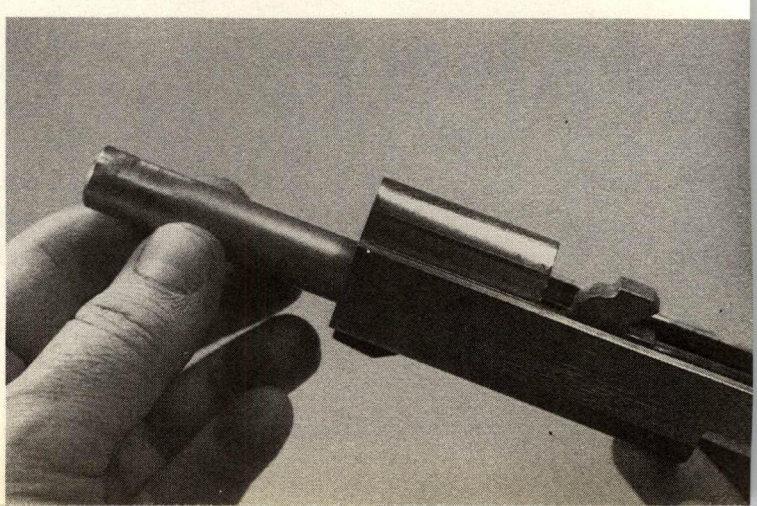
2. Cock the hammer, and move the slide back until the semi-circular cut in its left lower edge aligns with the retaining tab on the slide-latch. Remove the slide-latch toward the left.

3. Remove the slide assembly toward the front. The recoil spring and its plunger and guide are then taken off the underside of the slide.



4. Turn the muzzle bushing counterclockwise until it stops, and remove it toward the front.

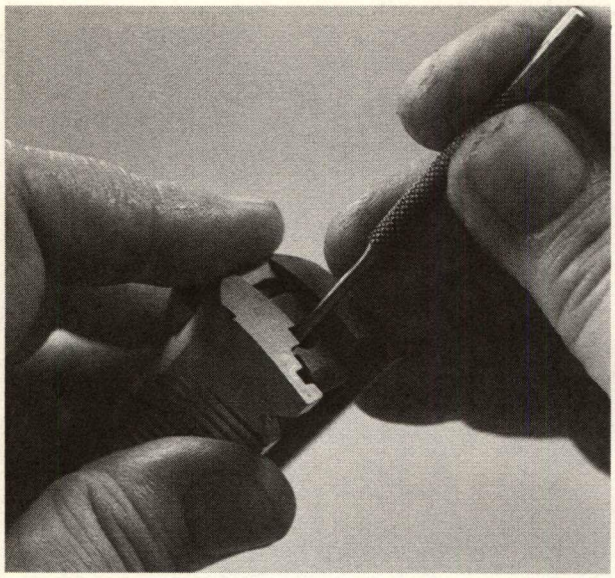
5. Move the barrel downward to disengage the locking lugs, and remove it toward the front. **Gun is now field-stripped.**



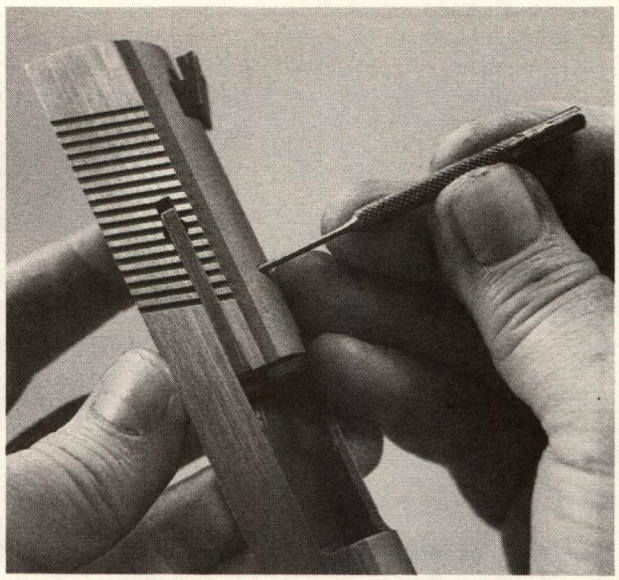
Coonan Model B field-stripped

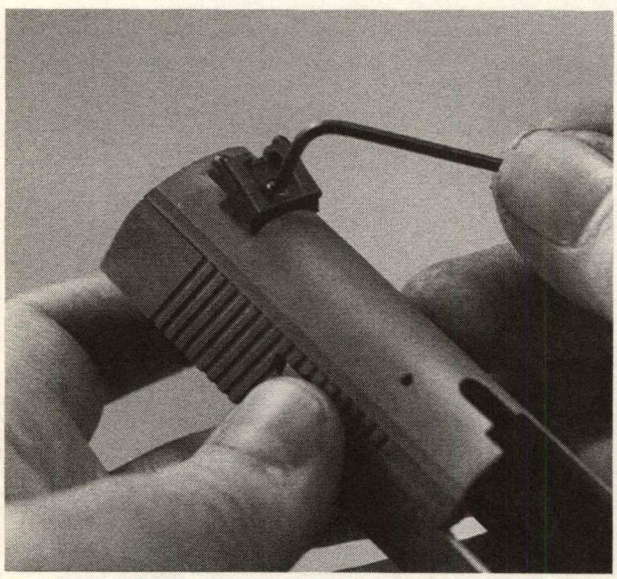
Detail Strip:

6. Depress the firing pin head with a suitable tool, slide the retaining plate downward, and remove the firing pin and its spring toward the rear. **Caution:** *The spring is under tension, so restrain the firing pin and ease it out.*

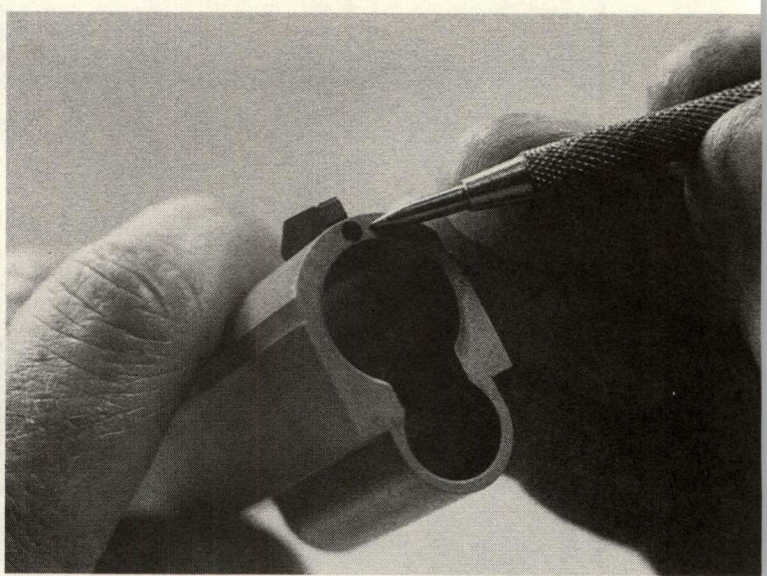


7. The extractor is pivoted and retained on the right side of the slide by a vertical pin. The pin is driven out downward, and the extractor and its spring are taken off toward the right.



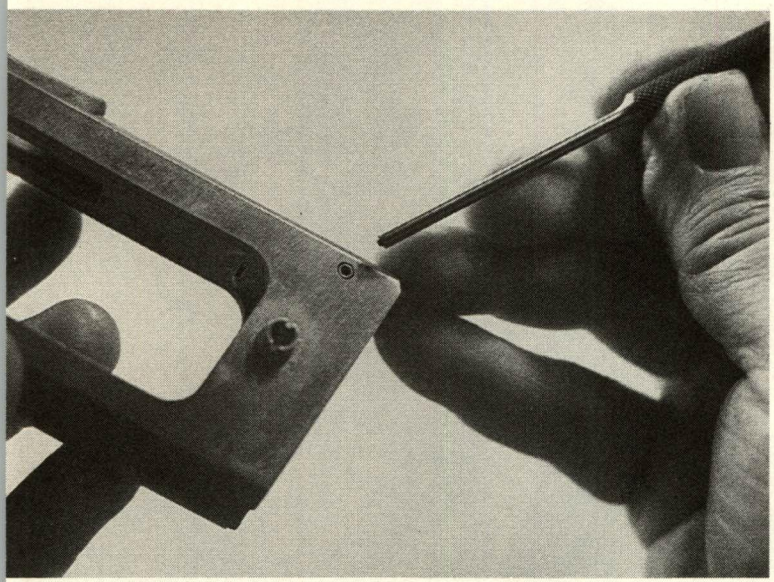


8. Using the Allen wrench supplied with the gun, or one of the proper size, loosen the screw in the top of the rear sight, and slide it off toward the right.

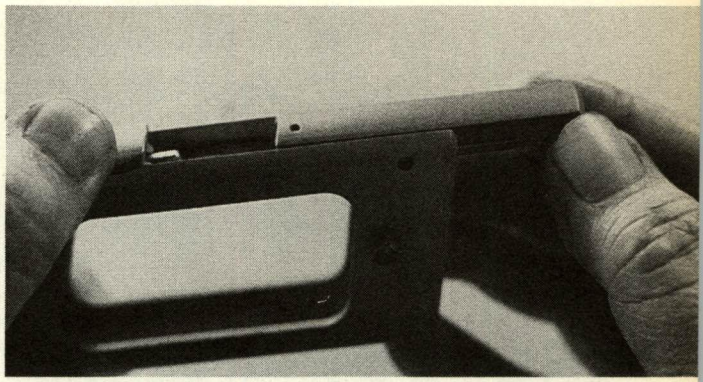


9. The front sight is also retained by an Allen screw, this one requiring a smaller wrench. After the screw is backed out, the sight is taken off upward.

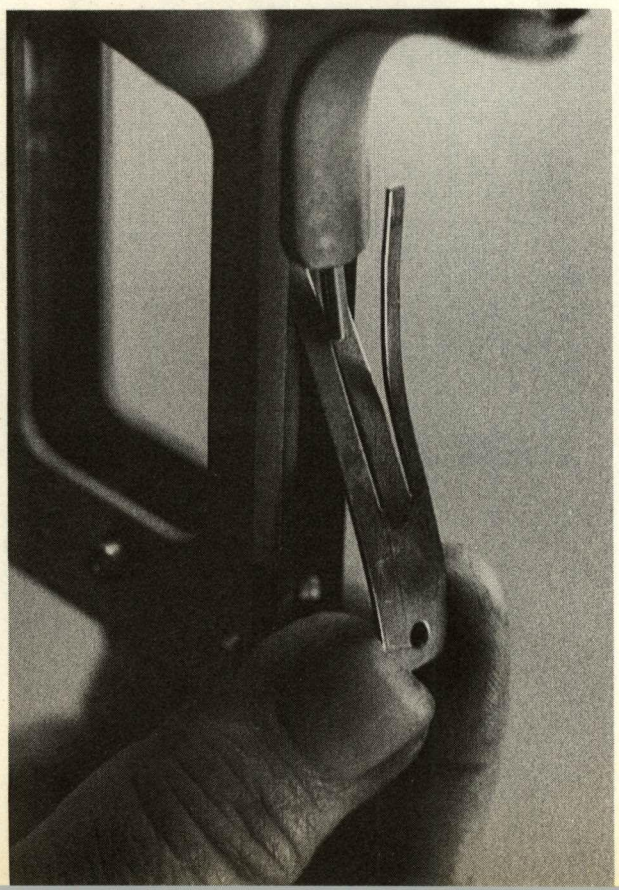
10. The mainspring housing is retained in a manner that is similar to the system in the old Government Model pistol, but it has a smaller cross-pin with no spring detent. The best tool to use in pushing it out is a roll pin punch of the proper diameter. Be sure the hammer is at rest (lowered) before the pin is pushed out.

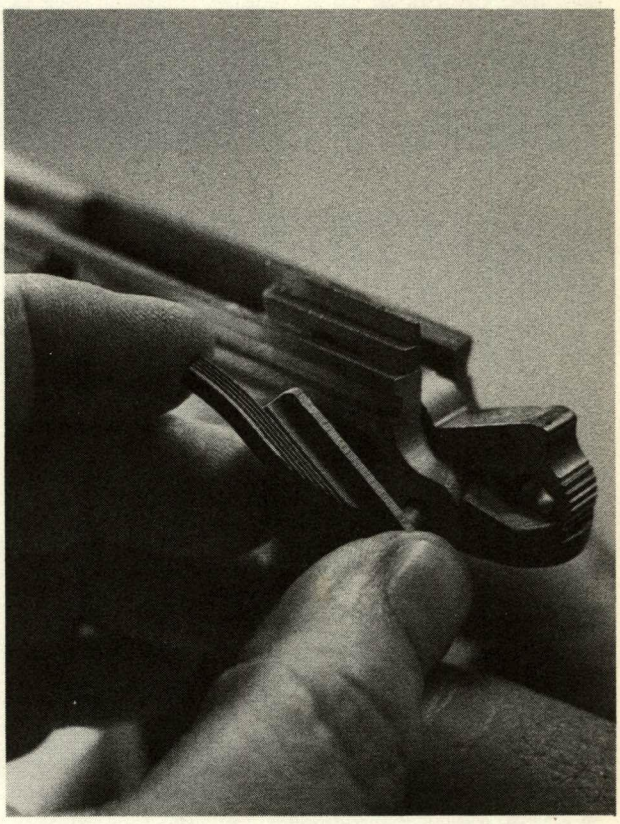


11. After the pin is removed, slide the mainspring housing downward out of the frame. The hammer spring and its plunger are retained in the housing by a small pin near the top. With the housing on a firm surface, depress the plunger with a tool and push the pin inward for removal. **Caution:** *The strong spring is under tension. Ease the plunger out.*



12. The sear, disconnector and grip safety combination spring will be freed by removal of the mainspring housing, and can be taken out at this time.

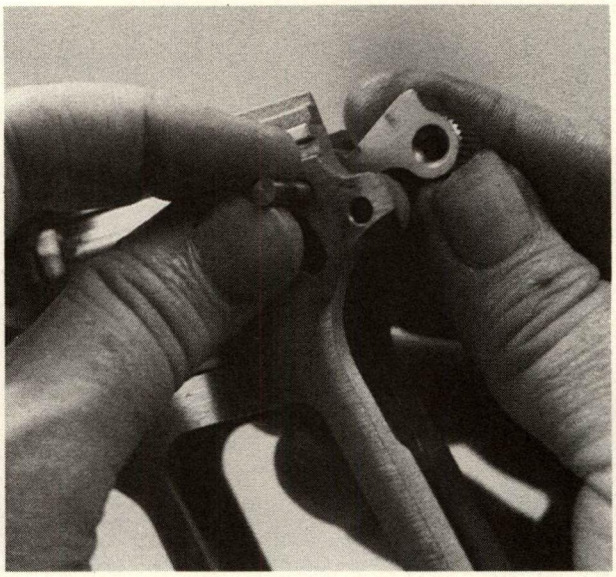




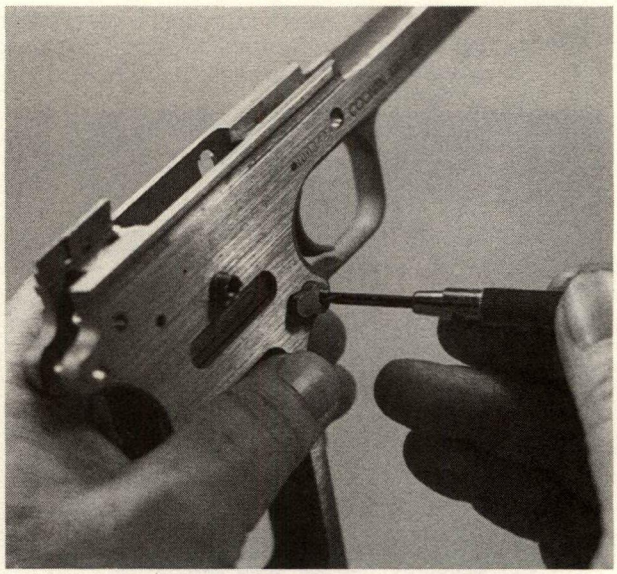
13. Cock the hammer, and move the safety toward its upper position while pushing its shaft toward the left. Remove the safety to the left.

14. The grip safety is now removed toward the rear.

15. Push the hammer pivot out toward the left, and remove the hammer from the frame. The hammer strut is pivoted and retained by a cross-pin in the hammer. If removal is not necessary, this pin is best left in place.

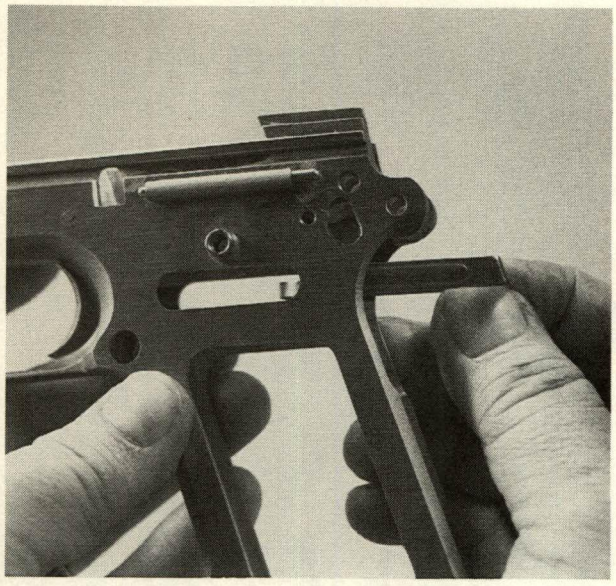


16. Removal of the smaller cross-pin forward of the hammer pivot will allow the sear and disconnector to be taken out the rear of the frame.

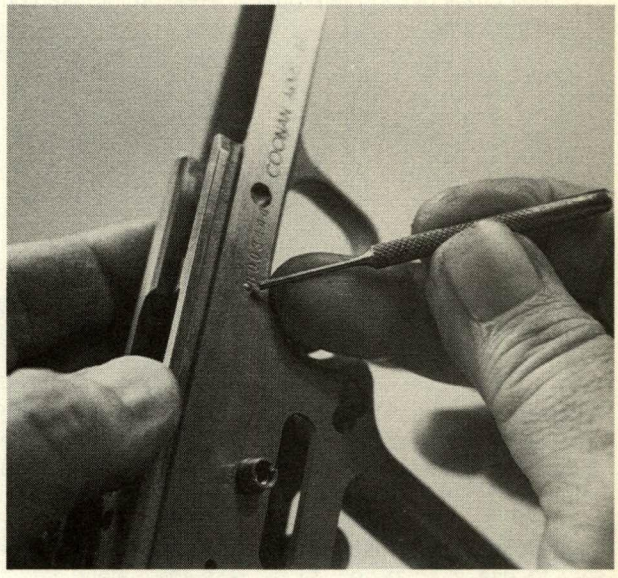


17. Turn the screw-headed retainer in the magazine catch counterclockwise while the catch is fully depressed, and remove the catch assembly toward the right. Turning the retainer clockwise will release the retainer and its spring for removal. **Caution:** *The spring is under tension. Control it.*

18. The trigger stirrup can now be slid straight out toward the rear for removal.



19. The trigger is pivoted and retained by a small cross-pin which is driven out toward the left. The trigger is then removed through the guard opening.

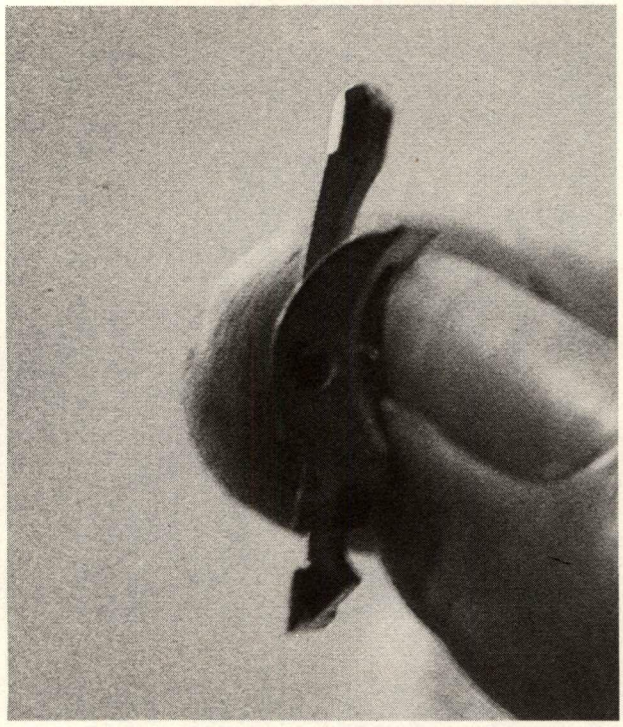


20. The combination slide-latch and safety plunger system, with its attendant spring, is removed from its housing toward the rear.

21. The ejector is a post-and-stud drive fit in the top of the frame, and it is best left in place unless replacement is necessary. If removal is needed, drive a wedge-shaped tool through the opening at the center of the ejector to lift it.

Reassembly Tips:

1. The sear and disconnector are shown here without their cross-pin, in the proper orientation for insertion in the frame.



When the combination spring has been installed in the frame, slide the mainspring housing part-way into the frame to hold it in place during installation of the safety and grip safety.

As the manual safety is pushed into place, it will be necessary to use a small tool to depress the safety detent plunger. When sliding the mainspring housing fully into the frame, be sure the tail of the hammer strut is properly aligned with the plunger in the top of the housing.

CZ 27

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the CZ 27 also apply to the following guns.

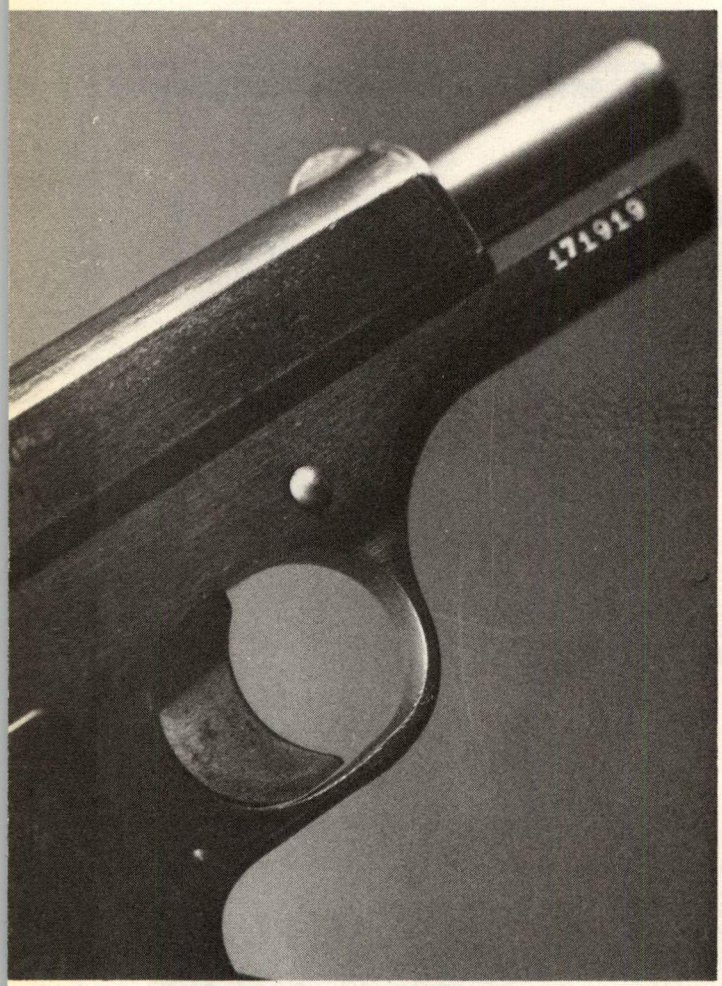
CZ Model 1922 **CZ Model 1924**

Data:	CZ Model 27
Origin:	Czechoslovakia
Manufacturer:	Ceska Zbrojovka, Prague
Cartridge:	32 ACP
Magazine capacity:	8 rounds
Overall length:	$6^{1}/_{4}$ inches
Height:	$4^{7}/_{8}$ inches
Barrel length:	$3^{7}/_{8}$ inches
Weight:	25 ounces

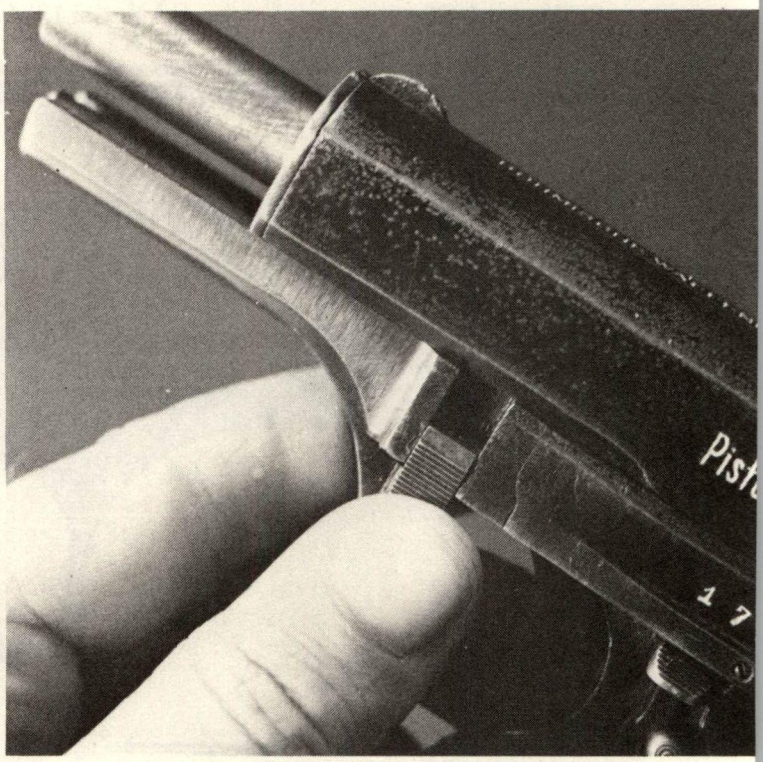
The Czech government had earlier adopted a design by Josef Nickl of Mauser to be their military pistol, and the Model 27 is a further simplification of this design, eliminating the turning-barrel locking system of the earlier guns. Other than this point, the instructions which follow will also apply to the Model 1922 and Model 1924 pistols, with some small variations. The Model 27 is a well-designed gun, and the pre-Nazi-occupation pieces are of the highest quality. Some of the late war-time pistols are fairly rough, but still work well, a tribute to the excellence of the design.

Field Strip:

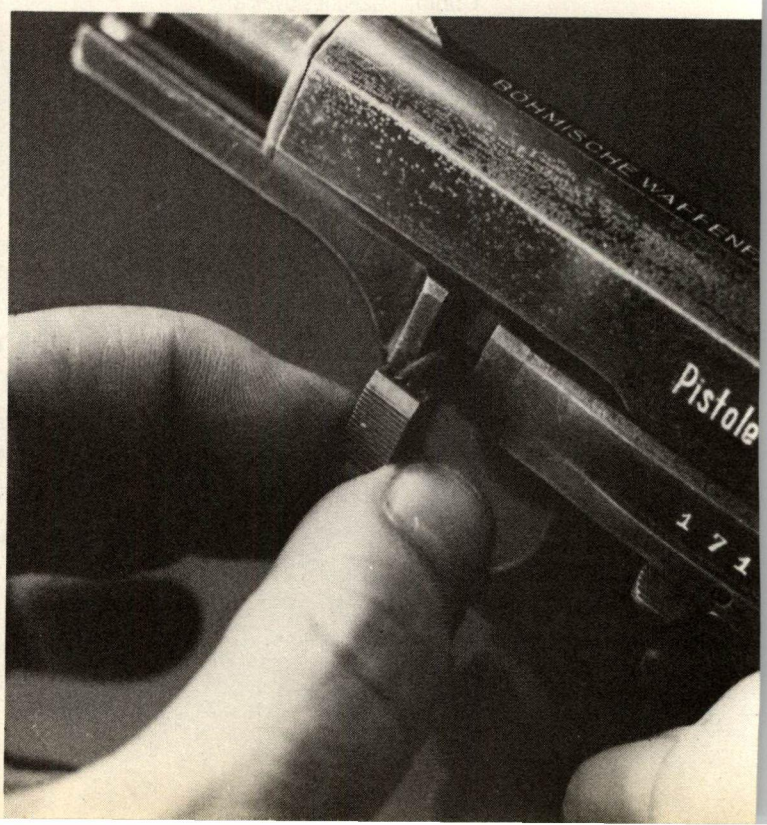
1. Leave the magazine in the gun and pull back the slide until it locks open. The release button for the takedown-latch is located on the right side of the frame, just forward of the trigger.



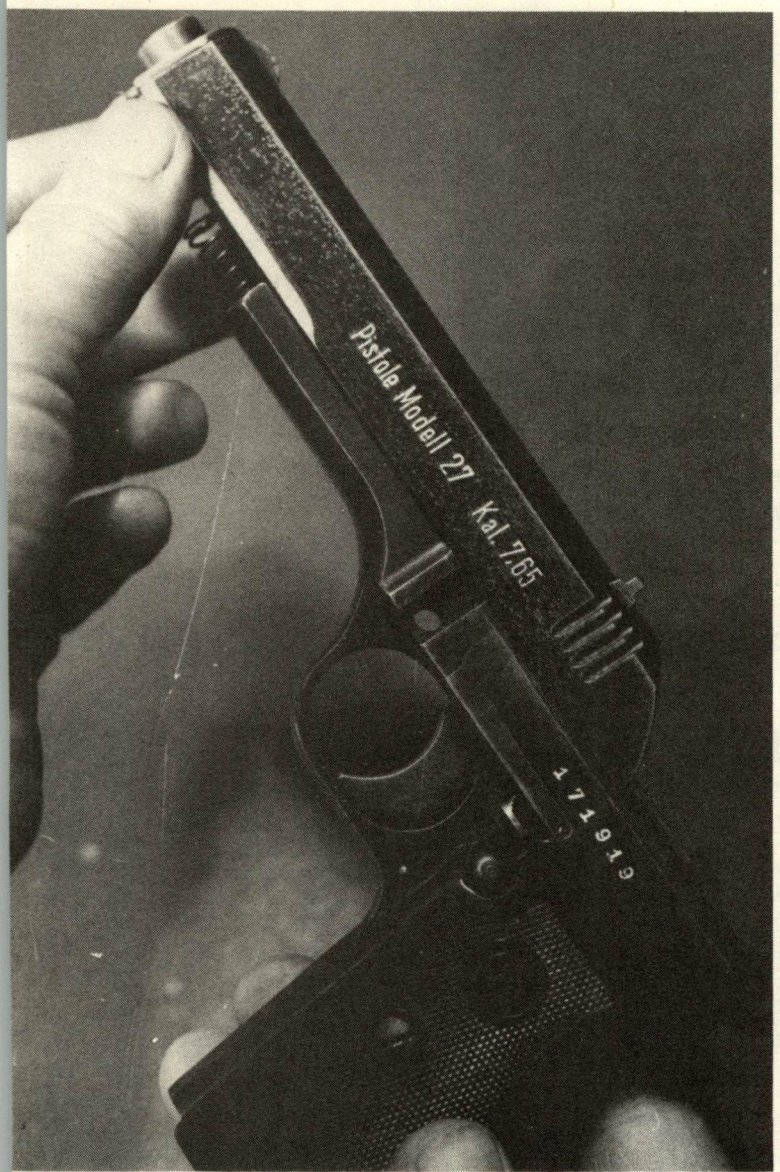
2. While depressing the release button, slide the takedown-latch on the left side down.



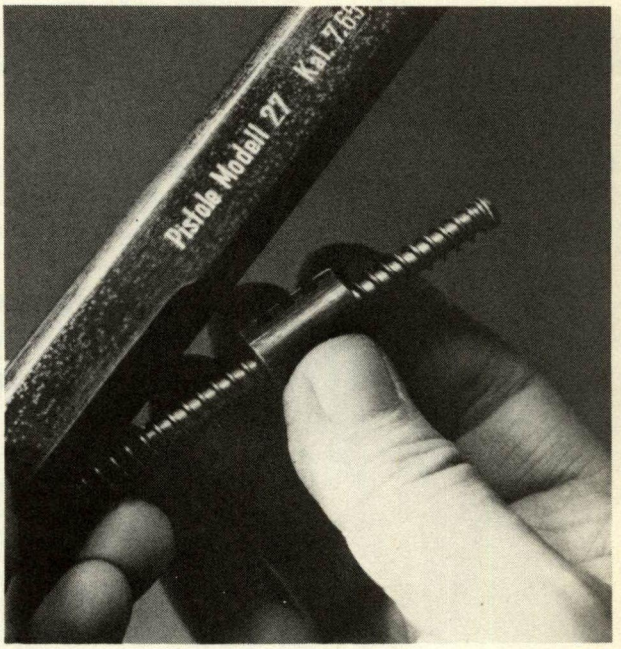
3. Withdraw the takedown-latch to the left and remove it from the frame.

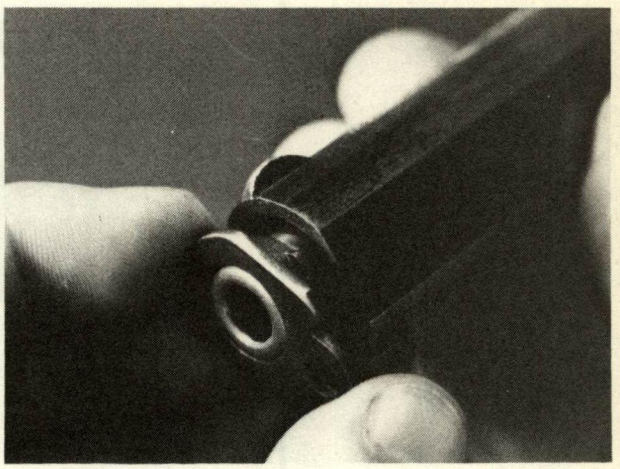


4. Holding the slide against the tension of the recoil spring, remove the magazine and run the slide assembly forward off the frame.



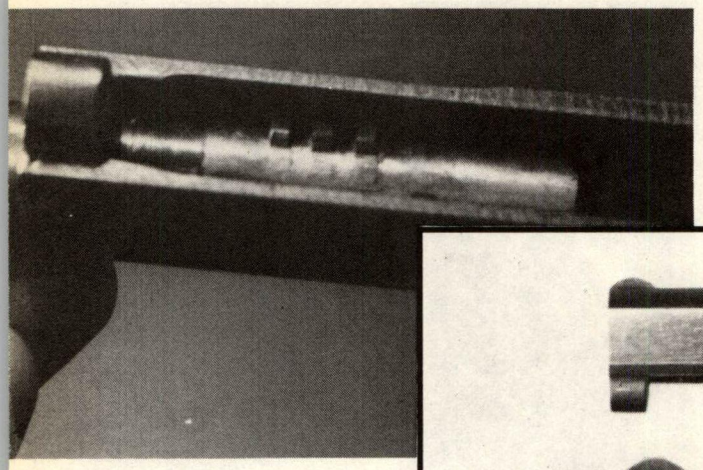
5. Remove the recoil spring, its guide rod, and the barrel retainer from the underside of the slide.





6. Turn the barrel bushing slightly to the left, until a groove on its top aligns with a groove in the slide edge, and remove the bushing toward the front.

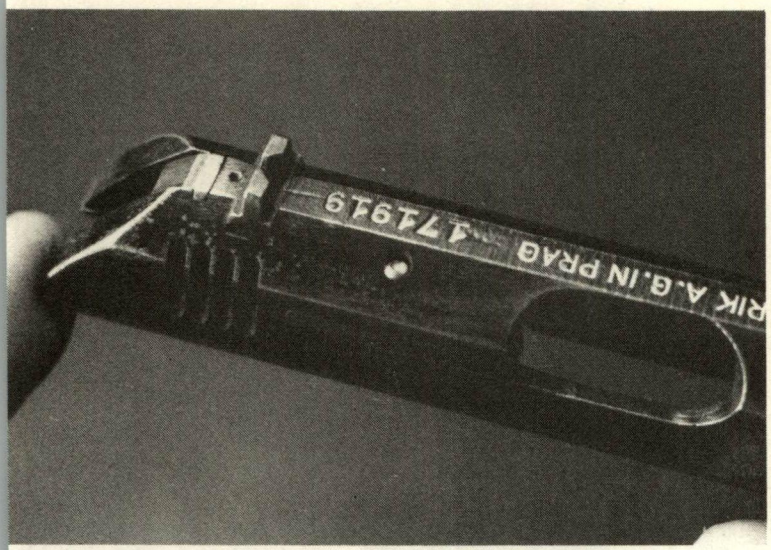
7. Move the barrel toward the front of the slide until its retaining lugs align with a recess in the left inner wall of the slide. Turn the barrel completely over until it stops then withdraw it from the front of the slide. **Gun is now field-stripped.**



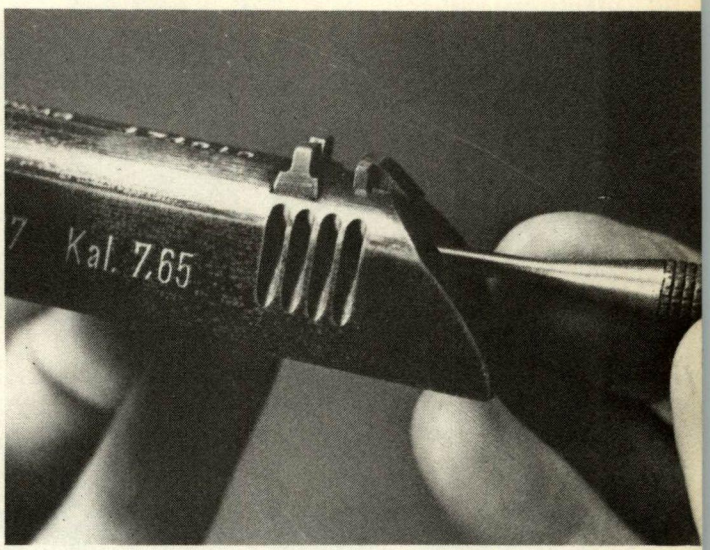
CZ 27 field-stripped

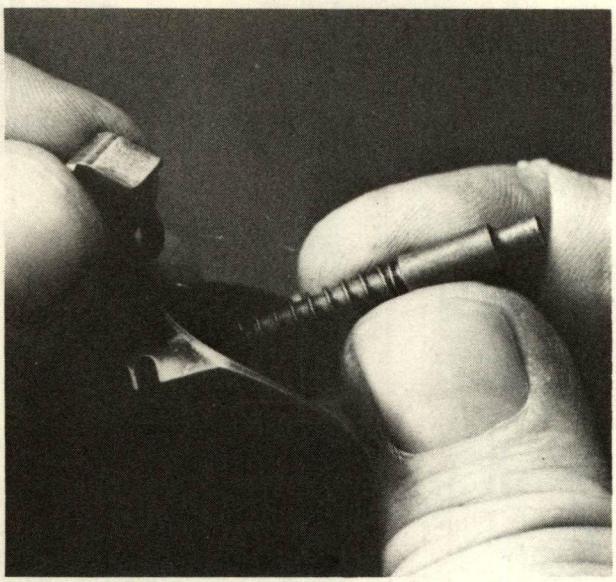
Detail Strip:

8. The extractor and its spring are retained by a vertical pin which must be driven out toward the top of the slide. Only half of the pin is accessible on the underside of the slide, so a very slim drift punch must be used.

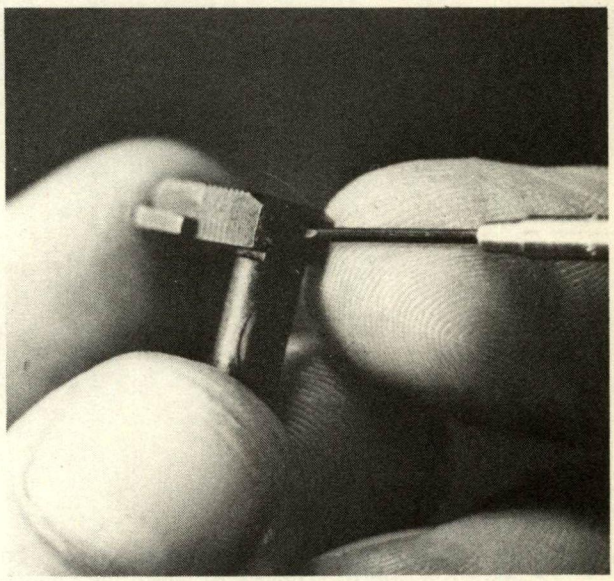


9. Depress the firing pin and lift the firing pin retainer from its T-slot in the slide. **Caution:** *The firing pin spring is under tension and can exit with some force. Ease it out, or catch it in a shop cloth.*





10. Remove the firing pin and its spring from the slide at the rear.

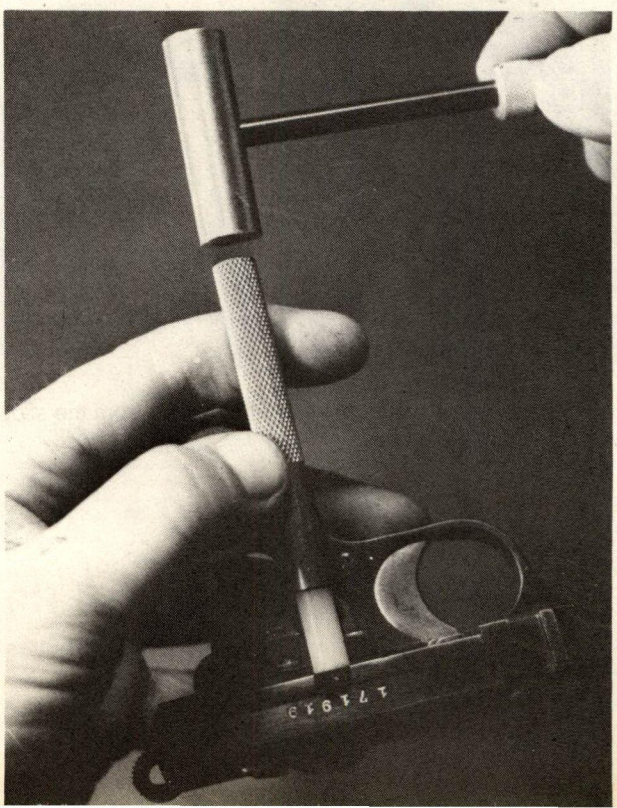


11. The takedown-latch can be dismantled by using a small tool to depress its spring, housed in the hollow release button, and sliding the button out of its T-slot.

12. After the grip screws are removed, the one-piece grip is slid straight off toward the rear.

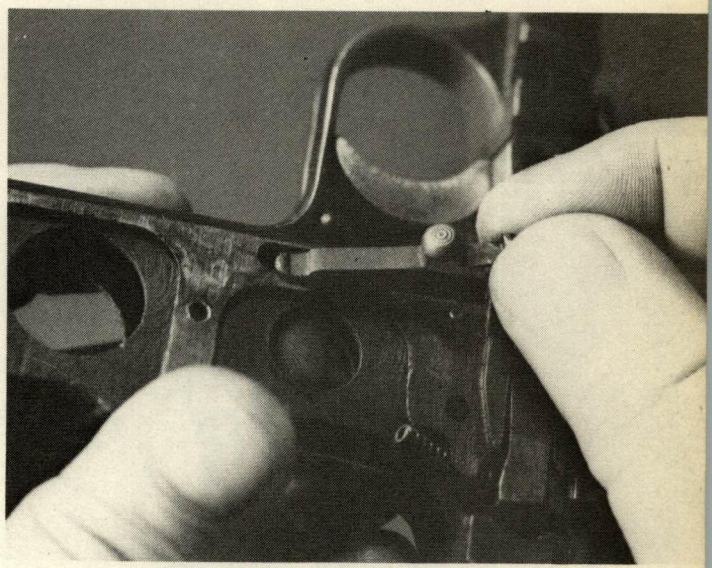
13. On earlier guns, the sideplate is secured by a small screw near its lower edge. It is not necessary to remove the screw—just back it out far enough to free the plate.

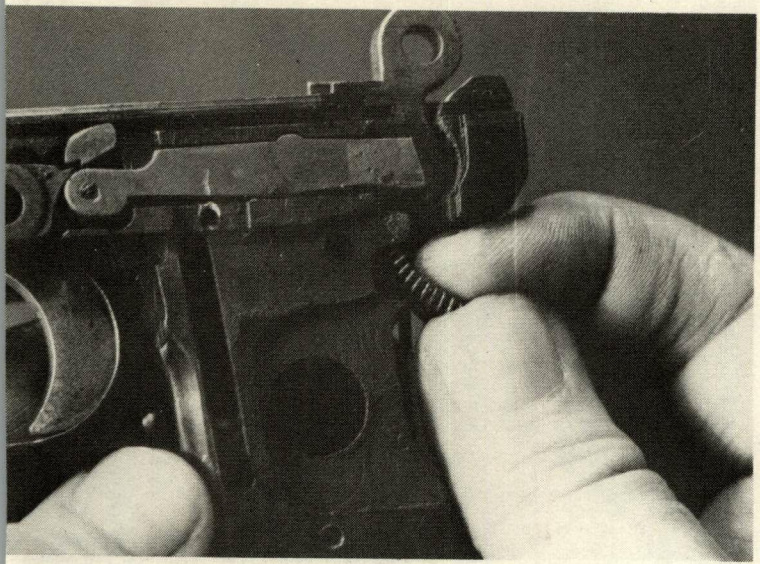
14. After the screw is backed out, the plate can be moved upward. If it is unusually tight, a nylon punch and a light hammer may be necessary to free it. Remove the sideplate from the frame.



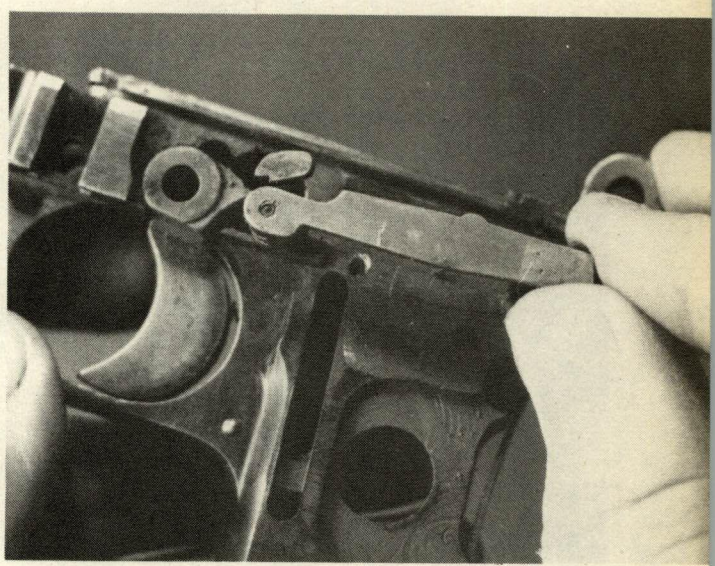
15. Move the rear of the safety-lever outward, then move it forward to disengage its front hook from the frame and take it off.

16. Lift the upper end of the safety release button and move it toward the top of the frame and off.



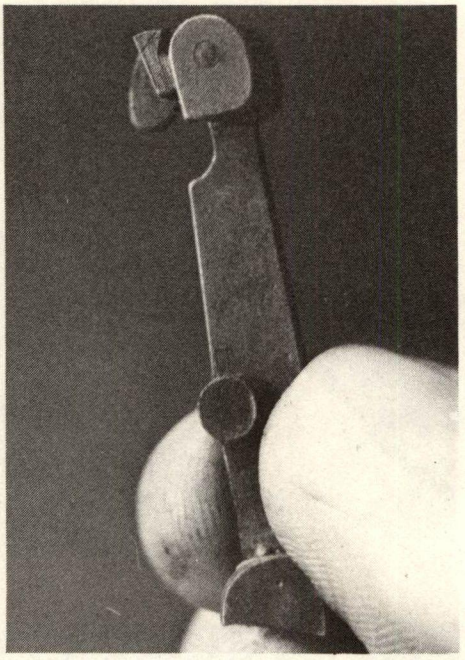


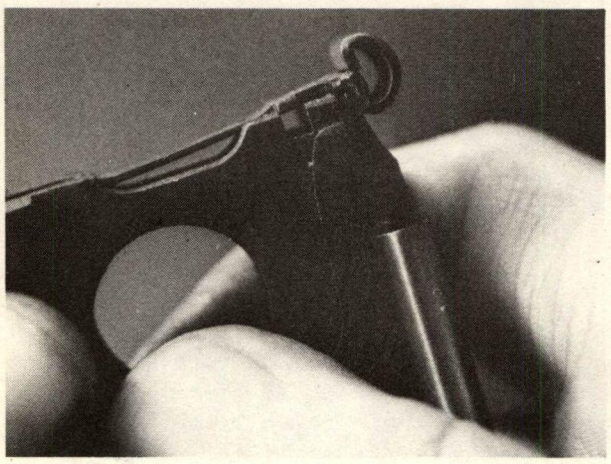
17. Remove the sear and safety spring from the frame.



18. With the hammer at rest, lift the combination sear and trigger bar off toward the left.

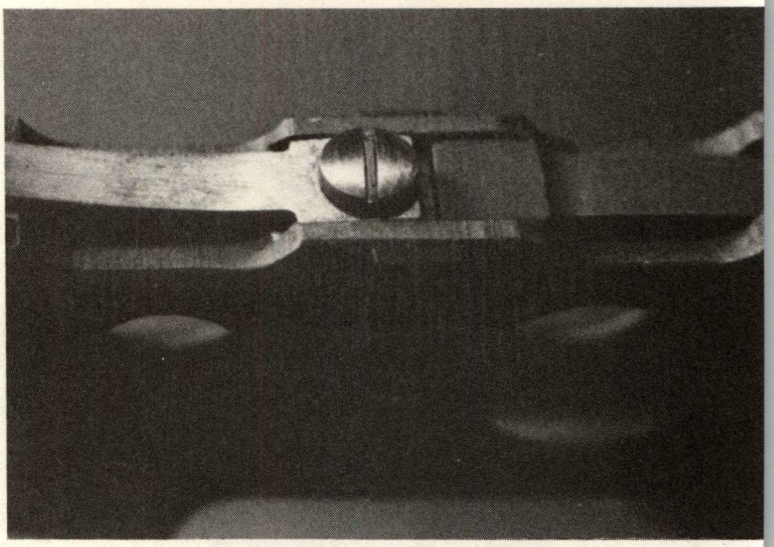
19. The disconnector and its spring are mounted in the forward end of the sear/trigger bar. Driving out the cross-pin will release the disconnector and spring, but this pin is usually fitted tightly, so take care that the wings at the end of the bar are not broken.

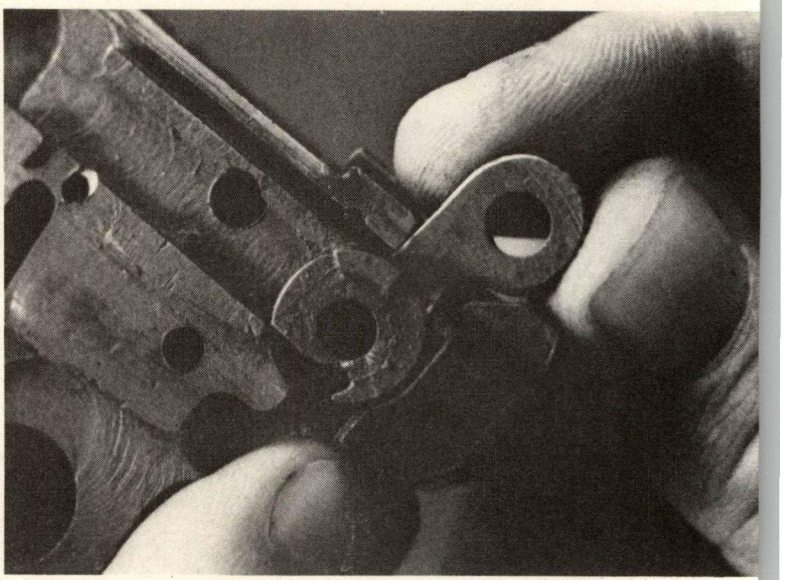




21. To remove the magazine catch, insert a large screwdriver against its forward hook, spring it back just enough for its side wings to clear their recesses in the backstrap, and lever it downward and off the frame.

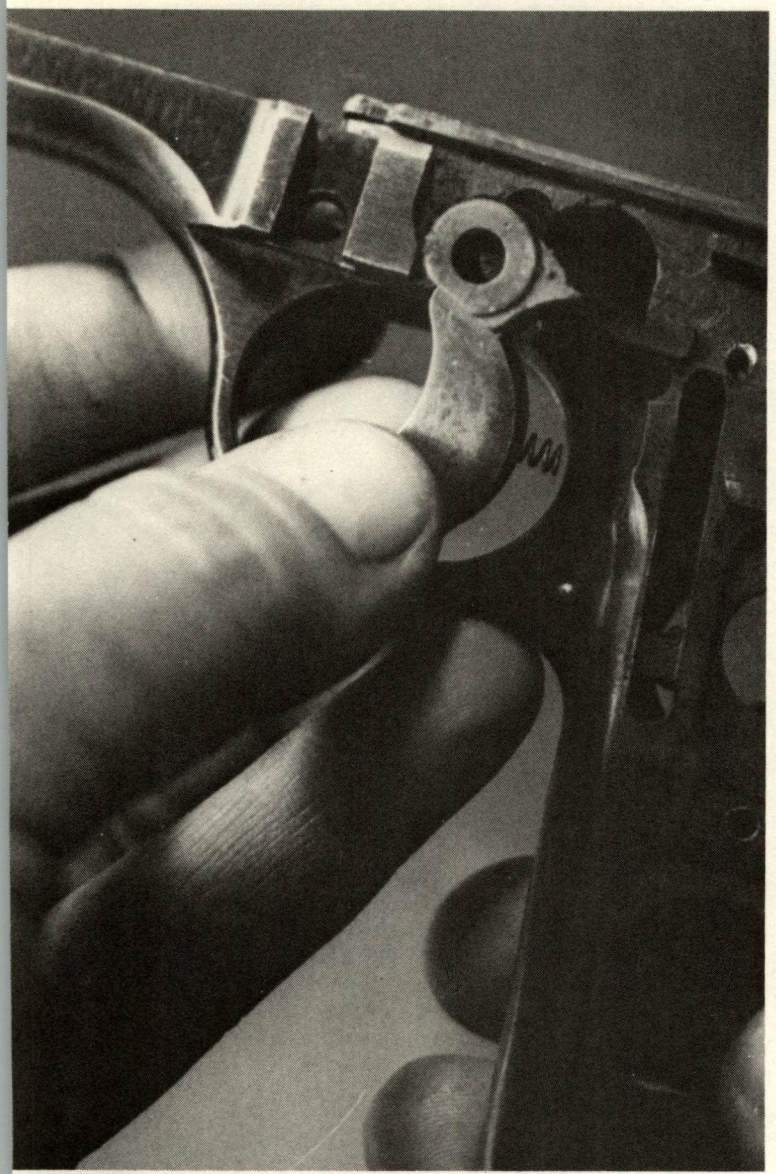
20. The hammer spring and the magazine catch, which is its own spring, are dovetail-mounted at the rear of the backstrap. The hammer spring is also secured by a screw.

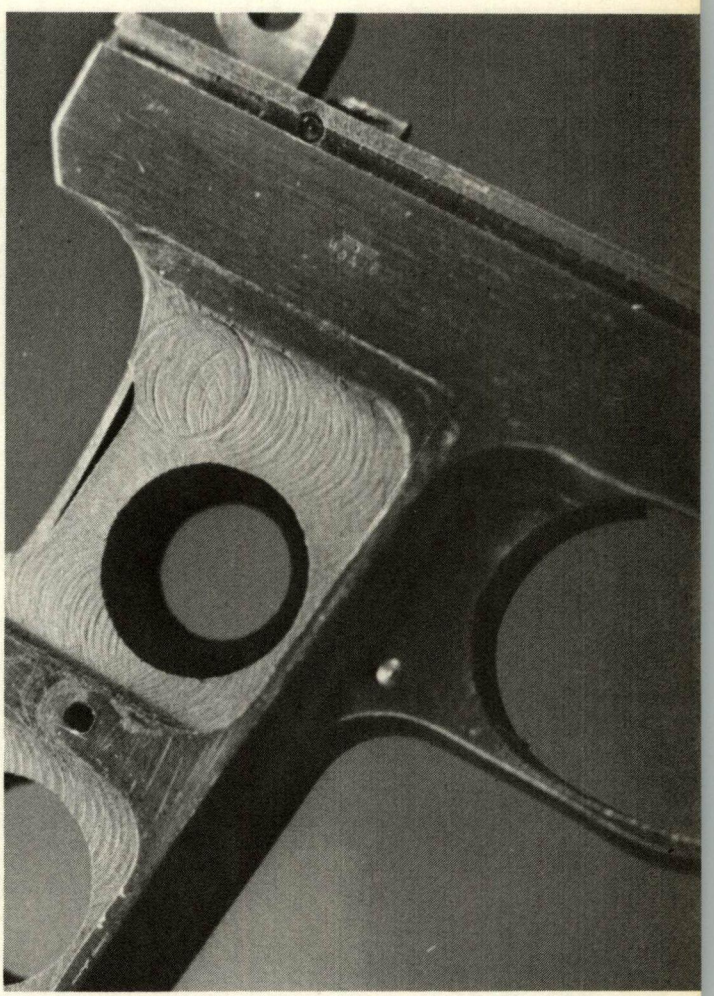




22. Depress the mainspring by inserting a tool between its upper end and the frame, and move the hammer toward the left for removal. Take out the hammer spring screw. Use a brass or nylon drift to tap the spring up and out of its dovetail for removal.

23. Removal of the trigger bar/sear will allow the trigger to pivot forward beyond its usual position. It is easily removed toward the left, along with its spring.

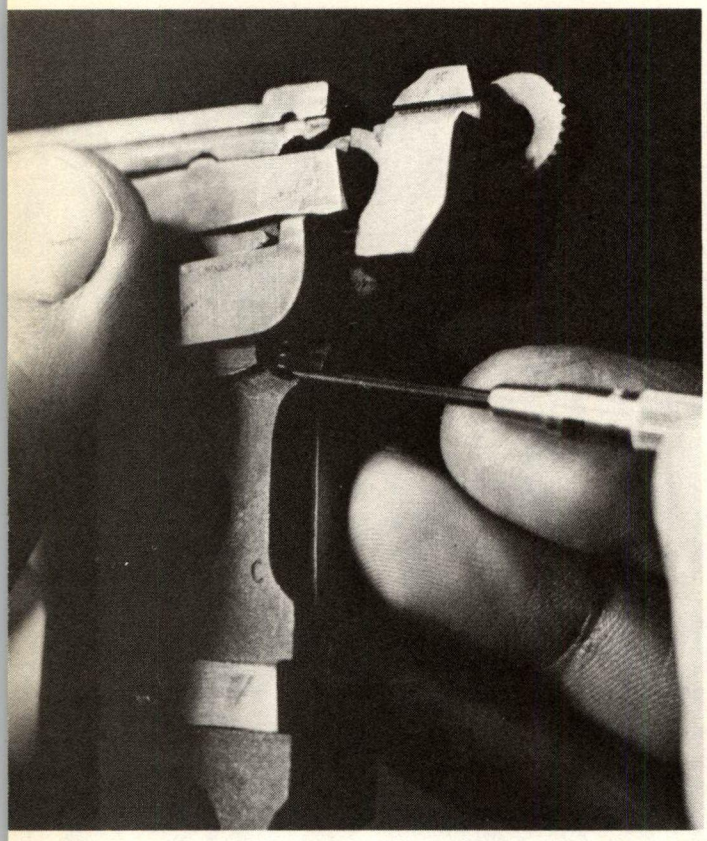




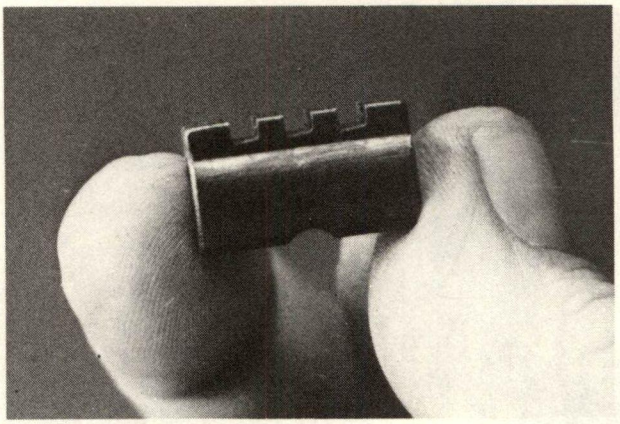
24. The cross-pin at the lower rear of the trigger guard retains the magazine safety. The cross-pin at the top edge of the frame holds the combination ejector and hammer stop block.

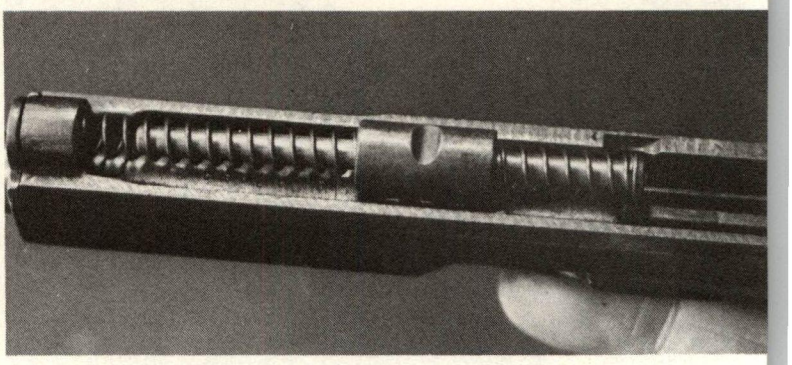
Reassembly Tips:

1. When replacing the safety-lever on the frame, use a small screwdriver to lift the lower end of the sear/safety spring, compressing it to slip onto its shelf inside the safety-lever.



2. The barrel retainer is equilaterally designed, and can be installed with either end forward.





3. Just before the slide assembly is reinstalled on the frame, the proper arrangement of the parts should look this way. Be sure the rear end of the recoil spring guide rod enters its hole in the frame, and use the empty magazine to hold the slide open while inserting the takedown-latch. Also, be sure the bar əl is all the way to the rear, positioning the barrel retainer groove to mate with the crosspiece of the latch.

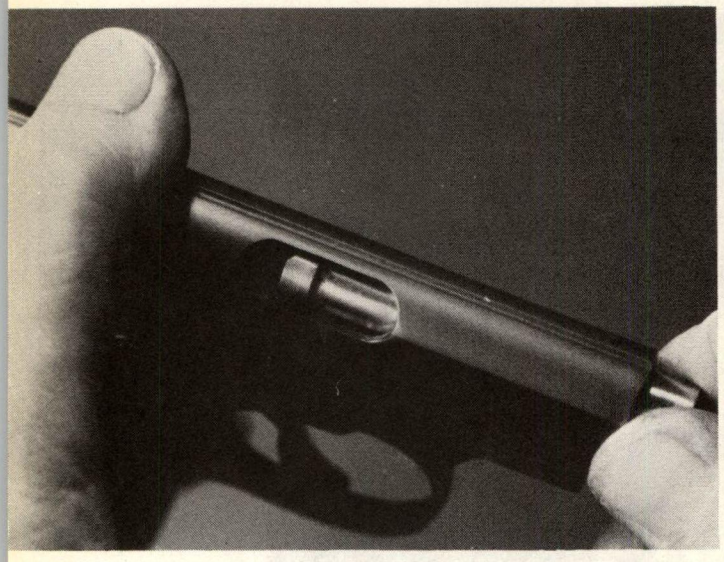
CZ 45

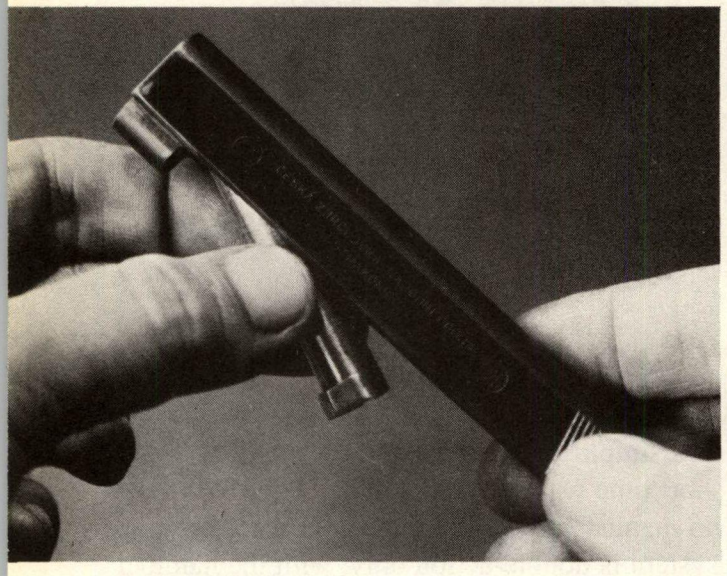
Data:	CZ Model 1945
Origin:	Czechoslovakia
Manufacturer:	Ceska Zbrojovka, Strakonice
Cartridge:	6.35mm (25 ACP)
Magazine capacity:	8 rounds
Overall length:	5 inches
Height:	3 1/2 inches
Barrel length:	2 1/2 inches
Weight:	15 ounces

Originally designed by Frantisek Myska in 1936, this fine little gun was simplified by Jaroslav Kratchovil in 1945, and for a short time was marketed in the U.S. The Model 1945 has no manual safety, and none is needed, because the firing system is double-action only, with the hammer not cocked by the slide action. This feature, along with a large magazine capacity and the legendary Czech quality and reliability, have made it a favorite for personal defense. The earlier gun, the Model 1936, differs mainly in having a manual safety and no magazine safety.

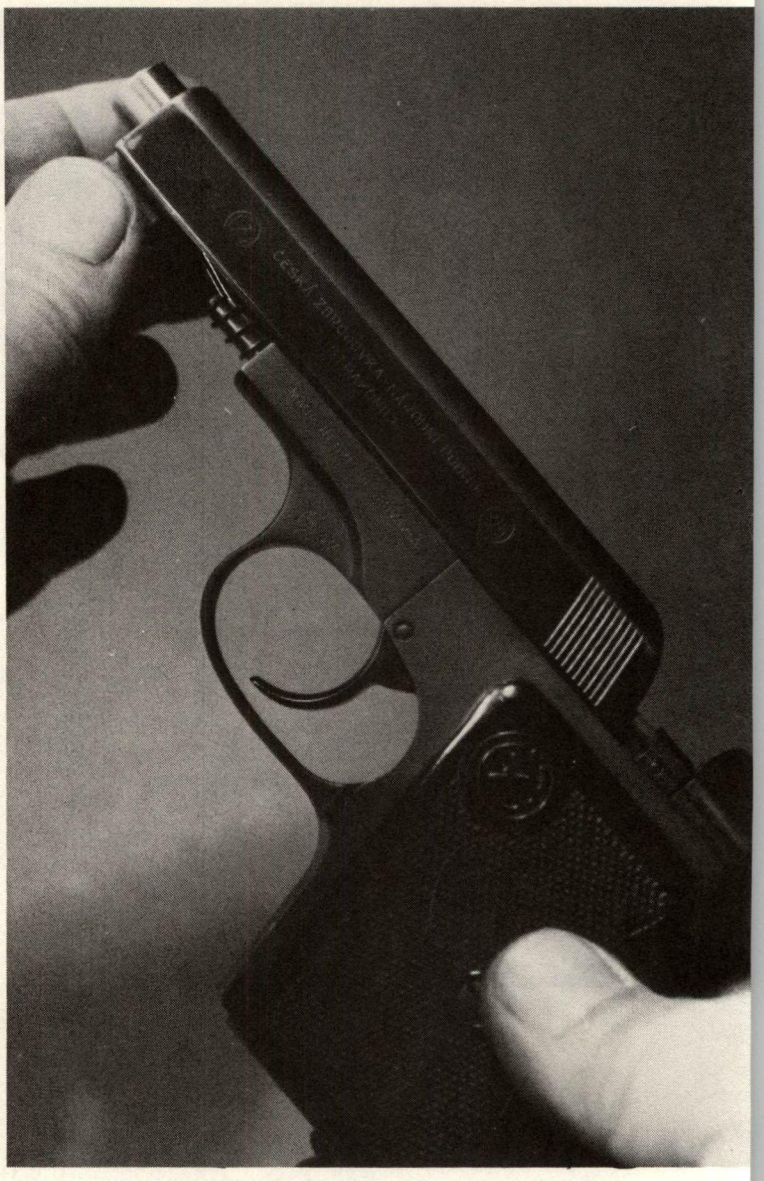
Field Strip:

1. With the magazine removed, move the slide toward the rear until the barrel lug cut inside the ejection port aligns with the rear edge of the barrel, and rotate the barrel to bring the lug up through the cut.





2. Run the slide and barrel assembly forward off the frame. Remove the recoil spring and its guide from the frame.

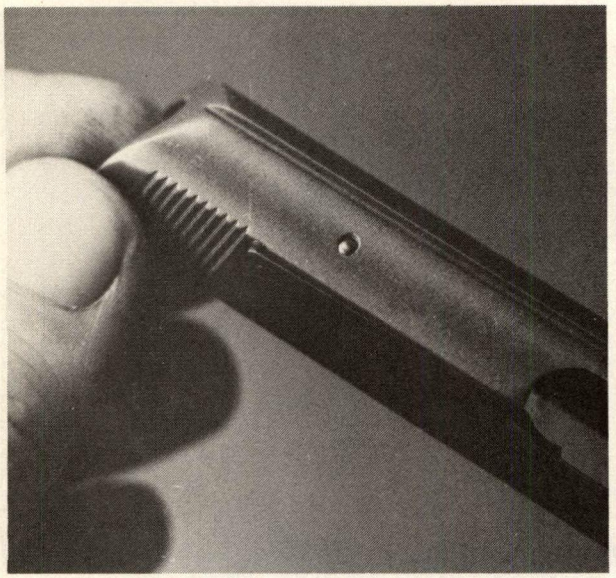


3. Rotate the barrel back until the lug is at the bottom, and remove the barrel from the underside of the slide. **Gun is now field-stripped.**

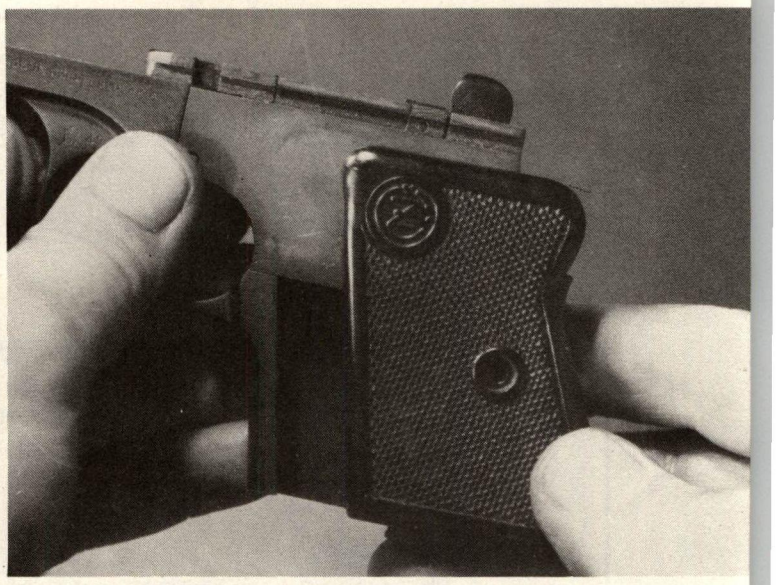
CZ 45 field-stripped

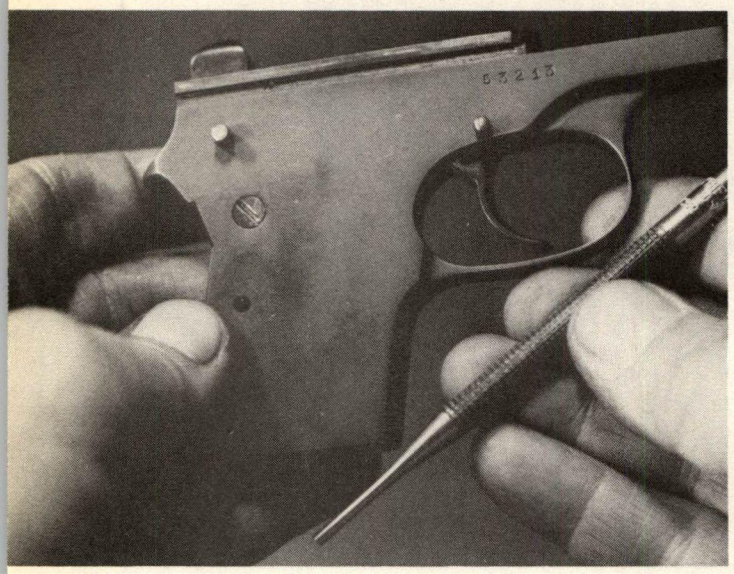
Detail Strip:

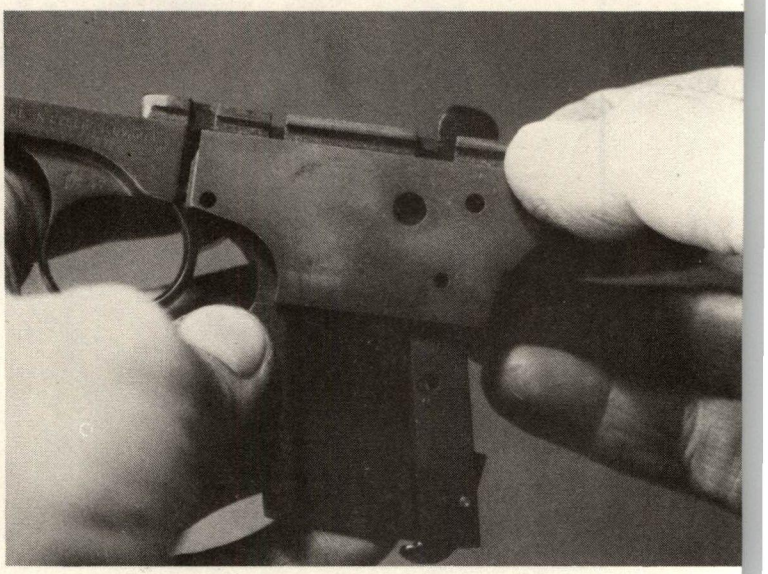
4. The extractor pivot pin is driven upward to release the extractor for removal toward the right side, along with its coil spring at the rear. An inner projection of the extractor retains the firing pin and its spring, and these are now released for removal toward the rear.



5. After the grip screws are removed, the one-piece grip is slid off toward the rear.



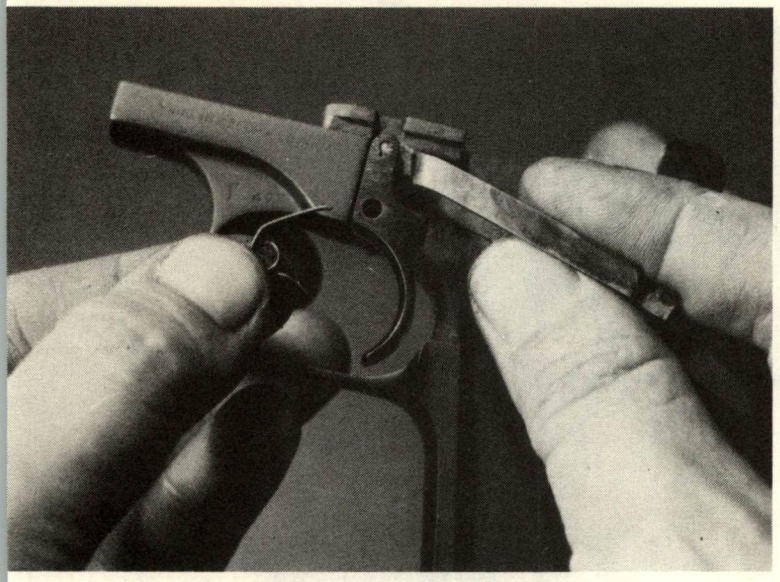




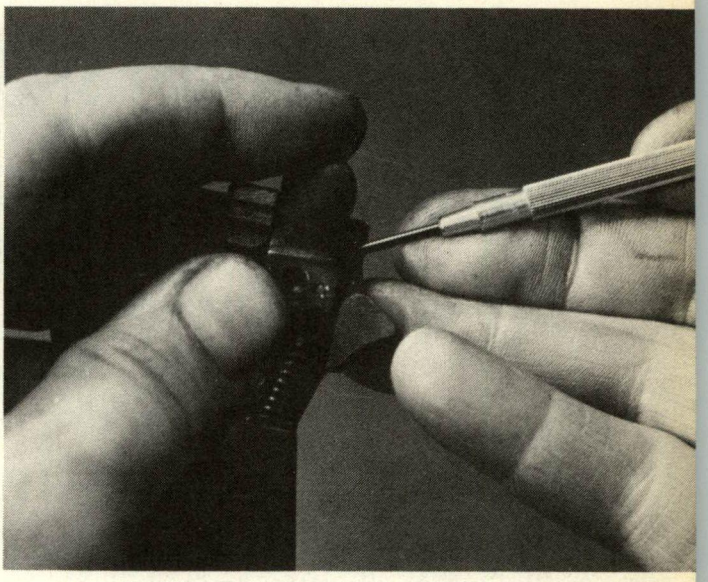
6. From the left side of the frame, drive the hammer and trigger pins to protrude about $^{1}/_{8}$ to $^{3}/_{16}$-inch toward the right, as shown. Remove the large screw located on the right side below the hammer pin. This will release the round-wire torsion spring which serves as a magazine safety, to be removed forward into the magazine well.

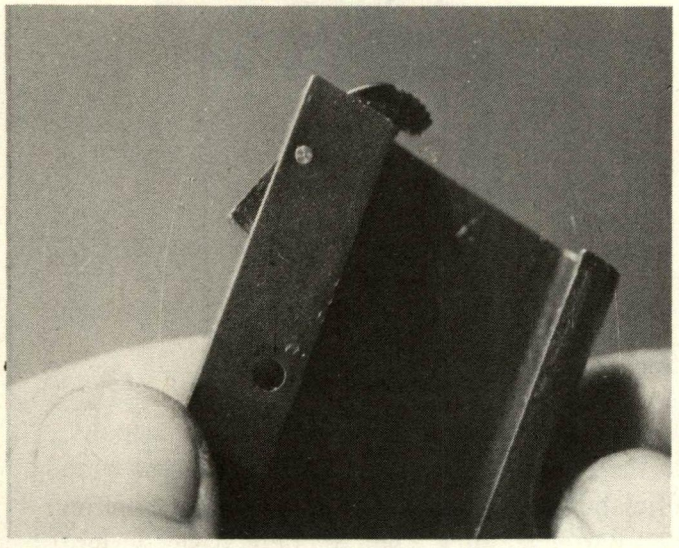
7. Removal of the screw also releases the large sideplate on the left side. Lift it at the rear, and disengage its front lip from its frame recess and remove it.

8. Depress the trigger bars, move the trigger to the fired position, and edge it out toward the left. As the trigger clears its post, the combination trigger and trigger bar spring will be released from inside the trigger, so take care that it isn't lost.



9. Grasp the hammer firmly, as the hammer spring is under some tension even when at rest. Use a small screwdriver to pry the hammer gently toward the left and off its post for removal, along with its spring and guide. If desired, the hammer and trigger pins can now be driven the rest of the way out of the frame.





10. The magazine catch and its spring are retained by a single cross-pin, which is drifted out for removal.

Reassembly Tips:

When replacing the trigger system, a slave pin to retain the spring is helpful, but not absolutely necessary. Be sure the rear arm of the spring is engaged in its groove on the left underside of the trigger bar.

Many owners of the CZ 45 intentionally leave out the magazine safety during reassembly as this will make the gun still usable as a single shot if the magazine is dropped or lost. However, if replacement is desired, insert the sideplate screw from the right side and fit the spring on the screw before replacing the sideplate. This will put light tension on the screw, and its tip will have to be nudged with a tool to align it with the hole in the sideplate.

Desert Eagle

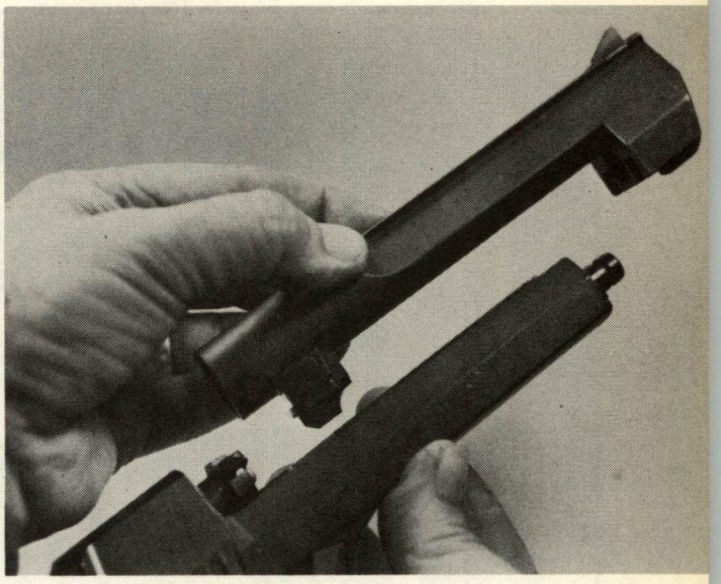
Data:	Desert Eagle
Origin:	Israel
Manufacturer:	Israel Military Industries, Rammat-Hasharon, Israel
Cartridge:	357 Magnum, 41 Magnum, 44 Magnum
Magazine capacity:	9 rounds (357) 8 rounds (41, 44)
Overall length:	10 1/4 inches
Height:	6 inches
Barrel length:	6 inches
Weight:	62 ounces (357, steel frame)

Made in Israel for Magnum Research of Minneapolis, Minnesota, the Desert Eagle is currently available in a wide variety of finishes and frame materials, and with the option of extended barrel lengths. The excellent basic design, though, has been practically unchanged through all of the versions and calibers. There may be slight variations in the shape of some parts, but the instructions can be used for any Desert Eagle pistol.

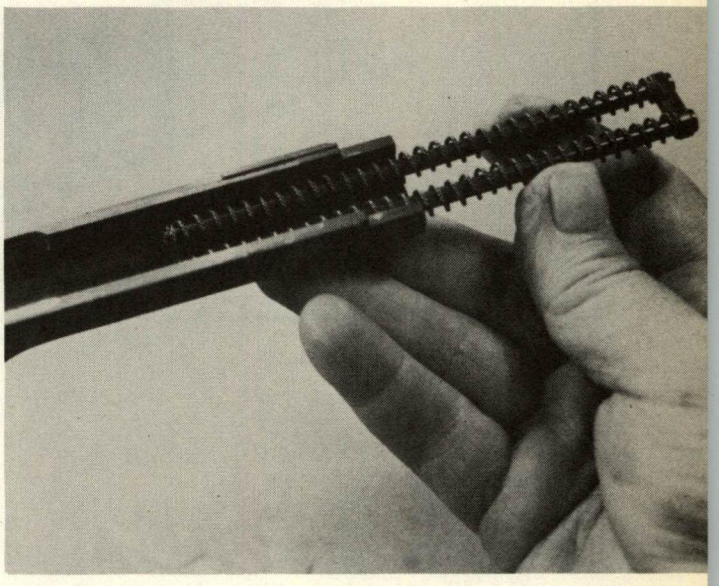
Field Strip:

1. With the magazine removed, depress the button on the left side at the front of the trigger guard, and turn the lever on the right side down and forward until it stops. The barrel and slide will move slightly forward.

2. Move the barrel forward just enough to clear the front of the bolt, and lift it off upward.



3. Move the slide assembly forward off the frame.

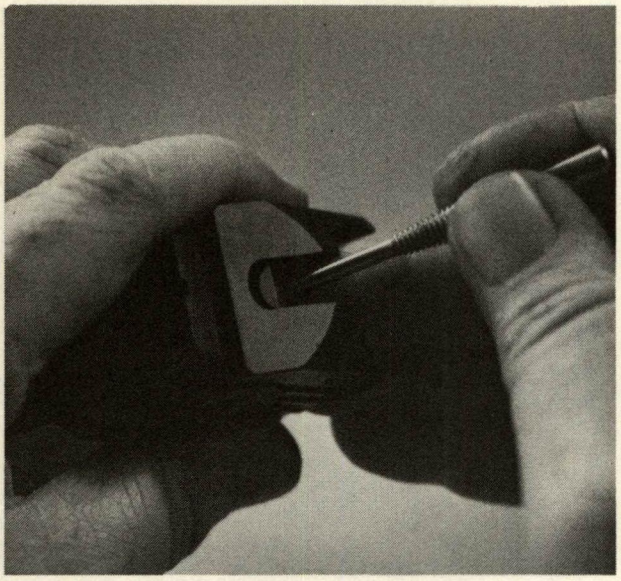


4. Slide the recoil spring assembly forward out of the frame. **Gun is now field-stripped.**

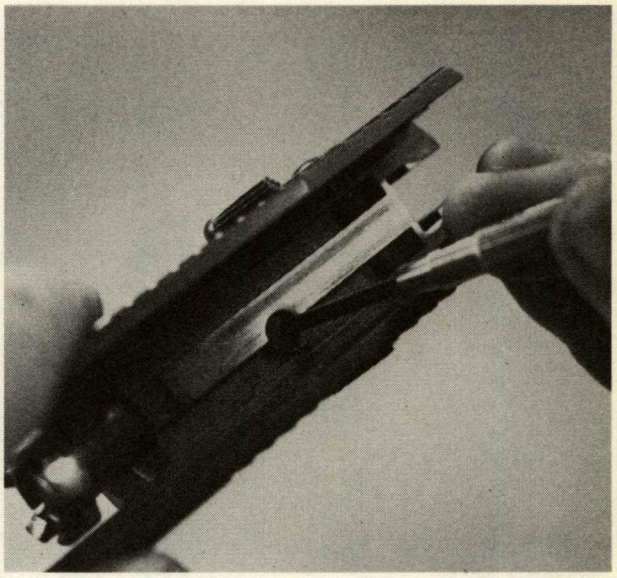
Desert Eagle field-stripped

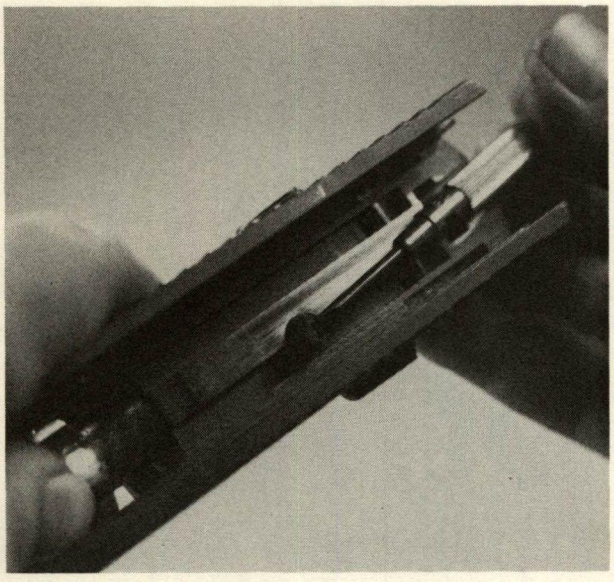
Detail Strip:

5. With the safety in off-safe position, depress the head of the firing pin, and slide the firing pin retaining plate downward. **Caution:** *The firing pin spring is under tension.* Remove the firing pin and its spring toward the rear.

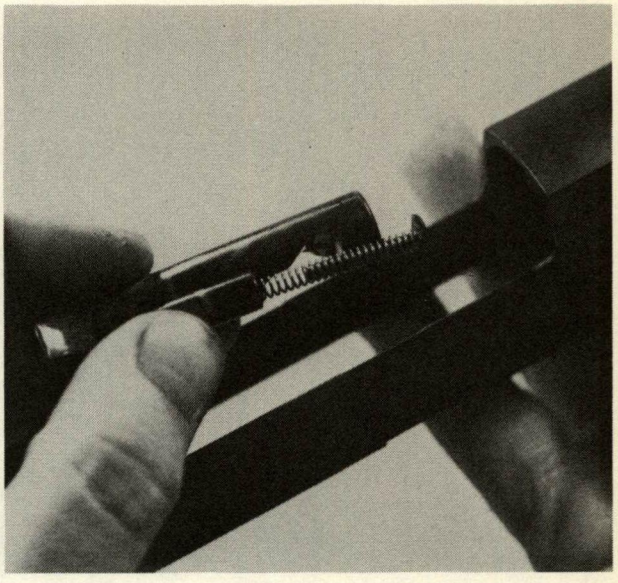


6. Use a small tool to rotate the bolt stop pin until its flat face is toward the rear.



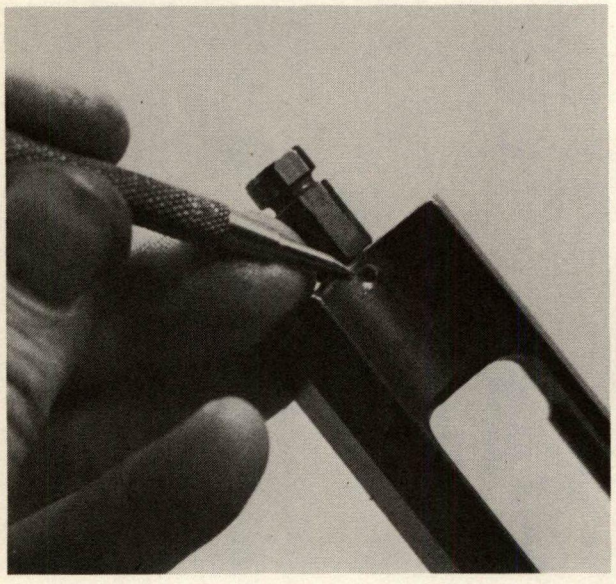


7. Using the notch in the flat face of the bolt stop pin, lift the pin out of its well in the slide. **Caution:** *Restrain the bolt assembly while this is done.*

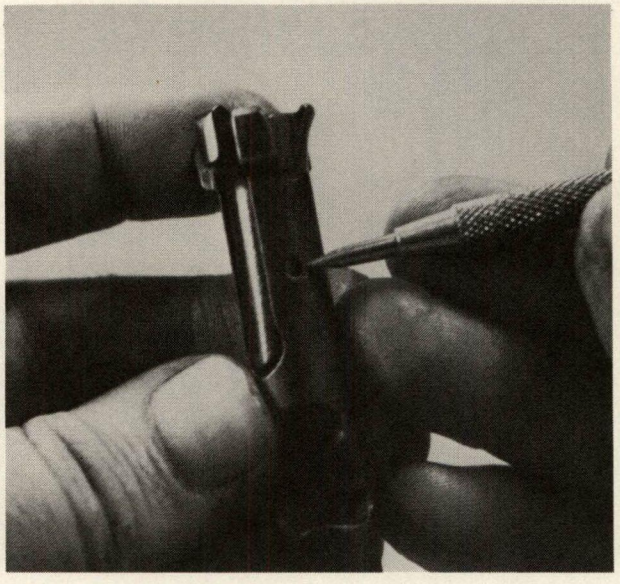


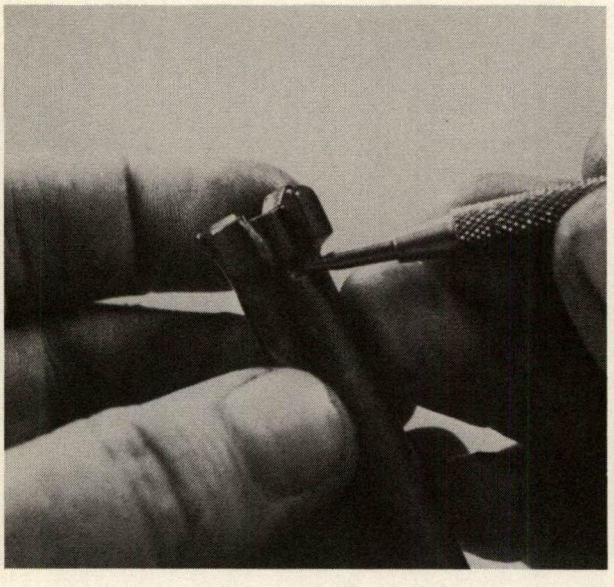
8. Remove the bolt, bolt plunger, and its spring toward the front.

9. The gas piston is retained on the front of the slide by a roll pin, angled down toward the right side. In normal disassembly, this is not removed.

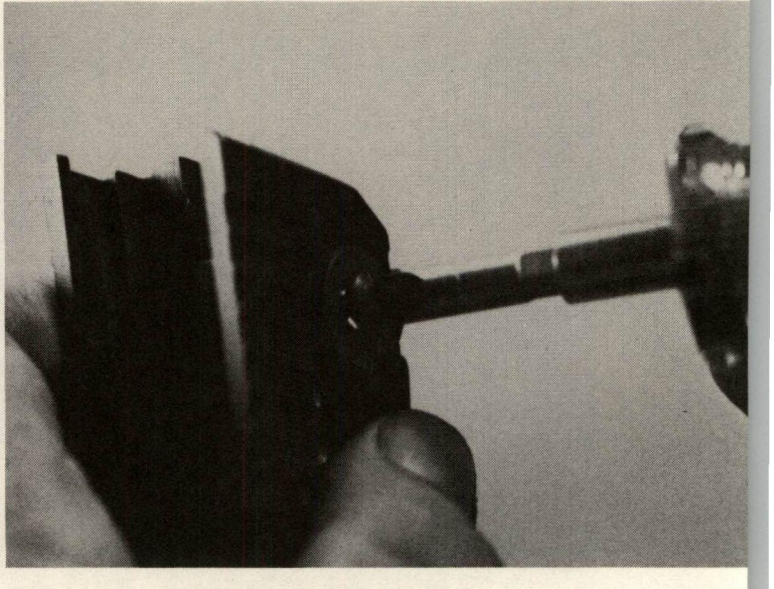


10. The extractor is retained in the bolt by a cross-pin. This can be driven out toward either side, allowing removal of the extractor and its spring.





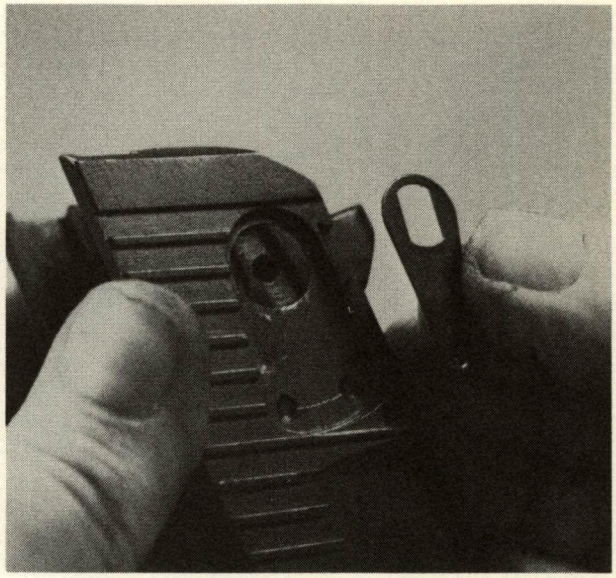
11. The ejector and its spring are also retained by a cross-pin in the bolt. **Caution:** *If this is to be removed, restrain the ejector, as the spring is compressed.*

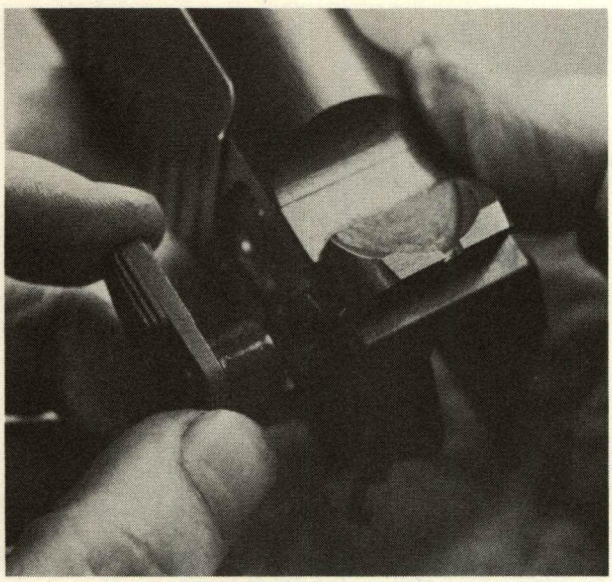


12. With a screwdriver carefully fitted to the slot, remove the screw from either safety-lever. The screw has a long threaded section and a fine thread.

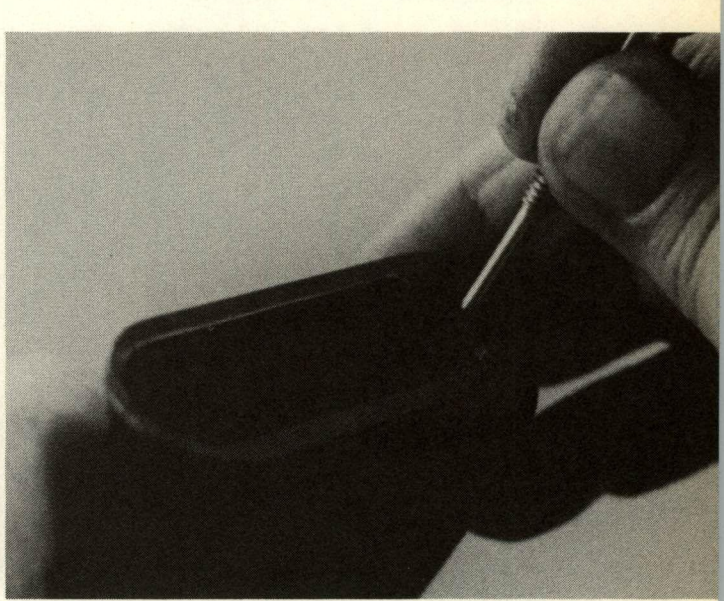
13. Remove the safety-lever from the slide.

14. Remove the safety detent spring from the slide.



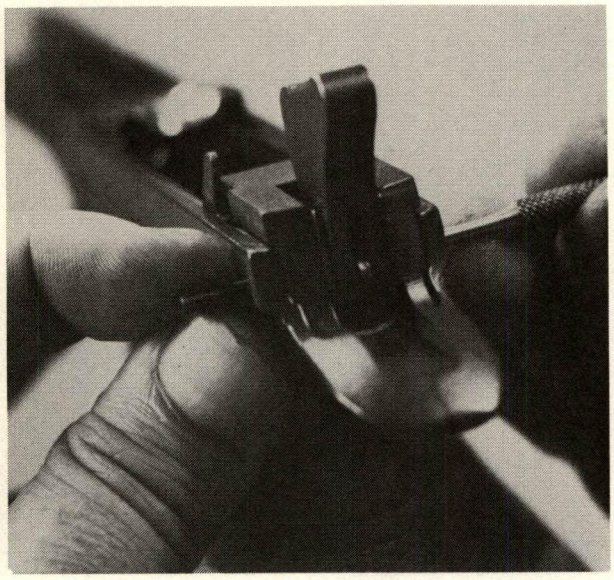


15. Remove the other lever (attached) and the safety cross-piece from the slide. You can, of course, take the other lever and spring off the cross-piece, if necessary. It is best, though, to leave one lever in place, to insure that the cross-piece is reinstalled in the proper orientation.

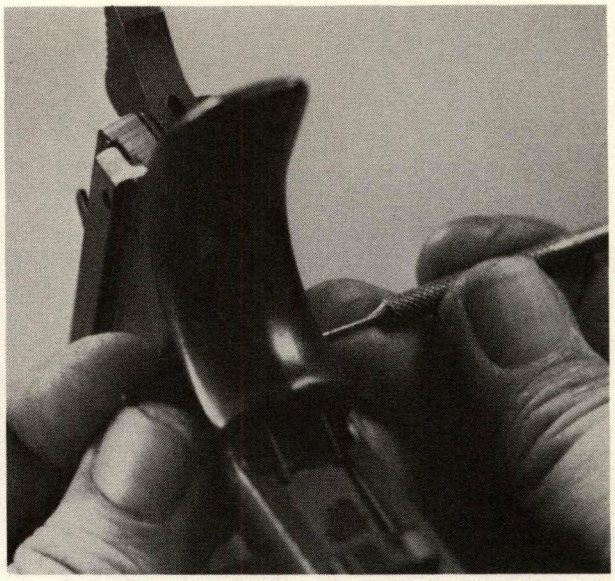


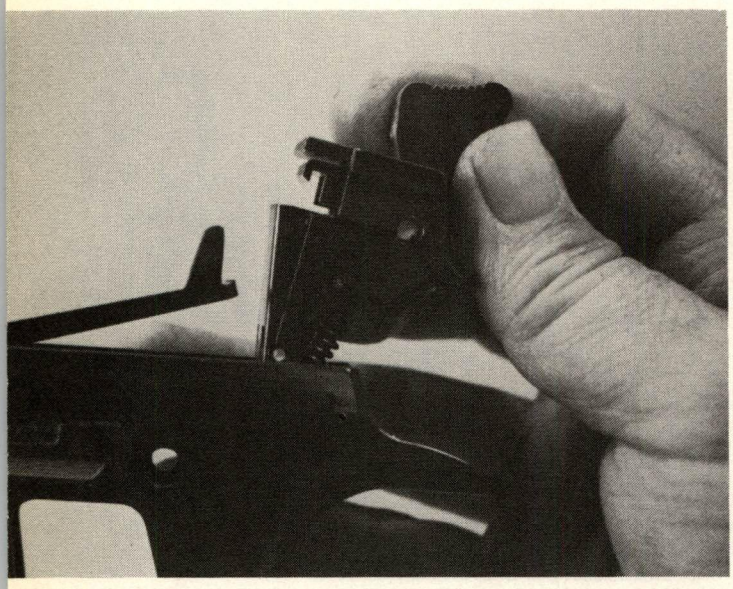
16. Through the access hole in the bottom of the grip frame, depress the plunger and slide the grip unit toward the rear. These are usually fitted tightly. For removal, it will be necessary to flex the grip piece to clear the front engagement lugs over the frame.

17. Drift out the large cross-pin at the upper rear of the frame.

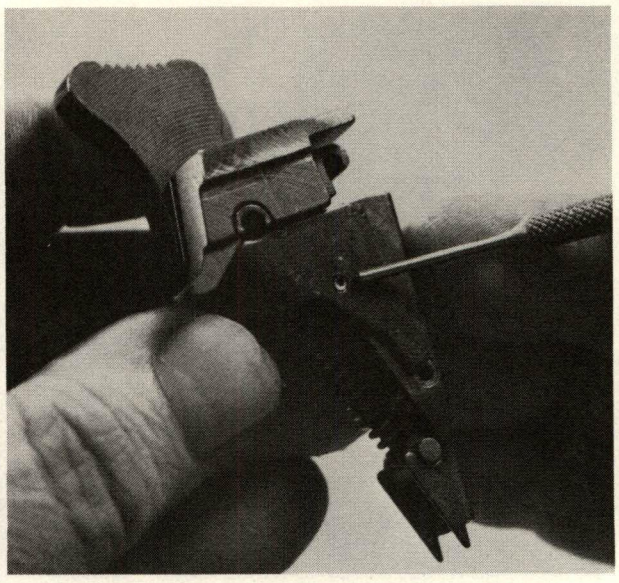


18. Drift out the small lower cross-pin in the frame.



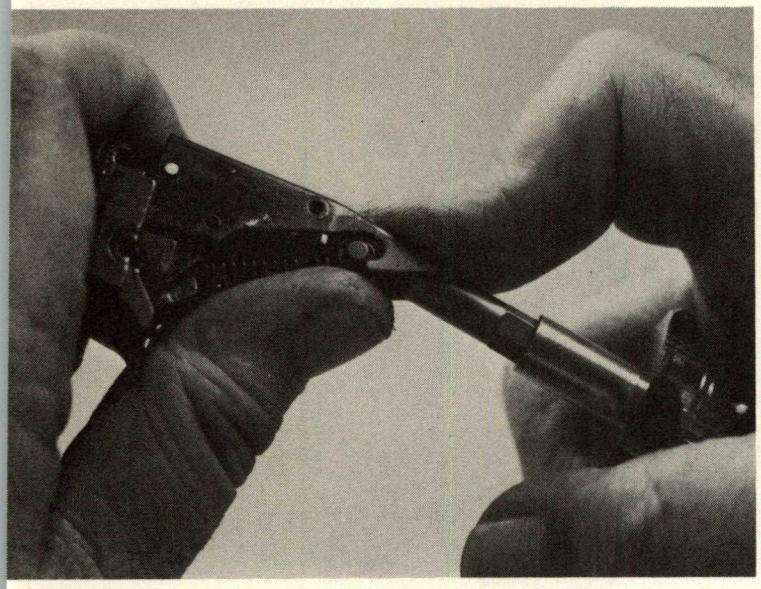


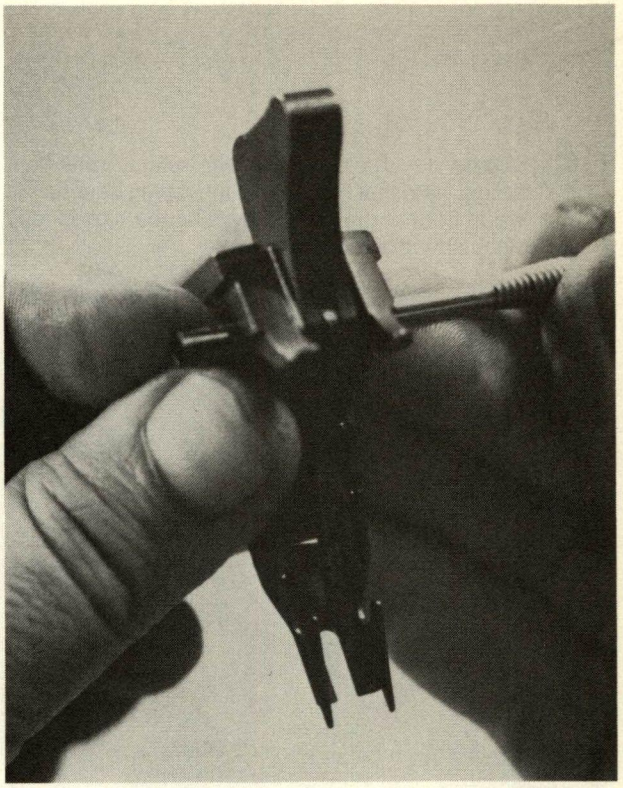
19. Remove the hammer and sear assembly upward and toward the rear.



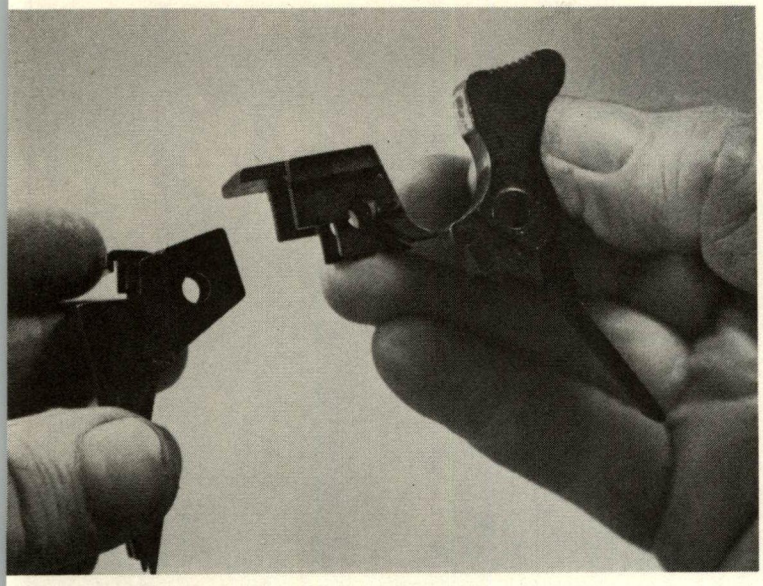
20. Drifting out the small roll pin in the hammer unit will allow removal of the shield, giving access to the other parts.

21. Insert a wedge-shaped tool beneath the hammer spring base and lever it upward, out of its recess. **Caution:** *Control the hammer spring.*

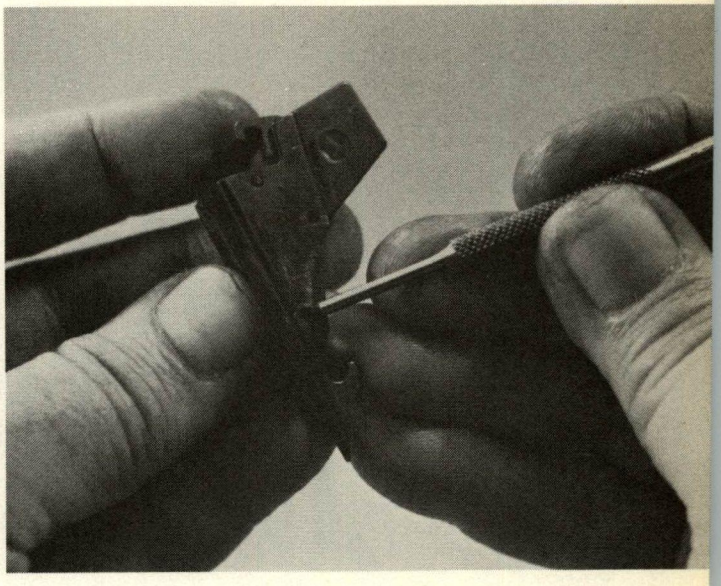




22. Push out the hammer pivot toward either side.

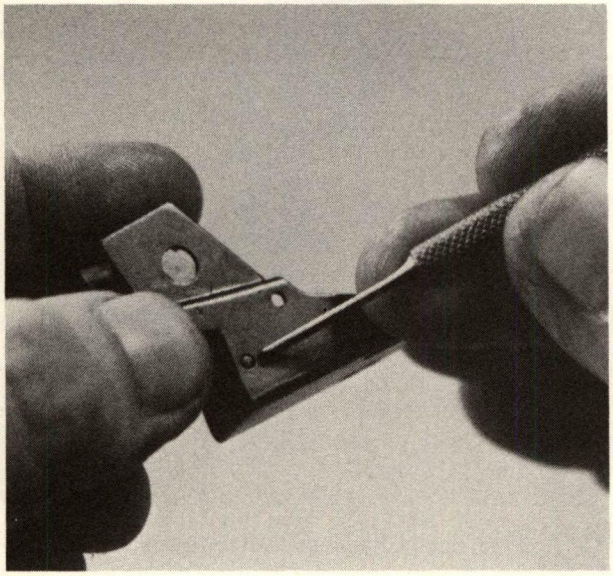


23. Remove the hammer assembly and the upper block of the sub-frame. The hammer strut can be removed by pushing out the small cross-pin.

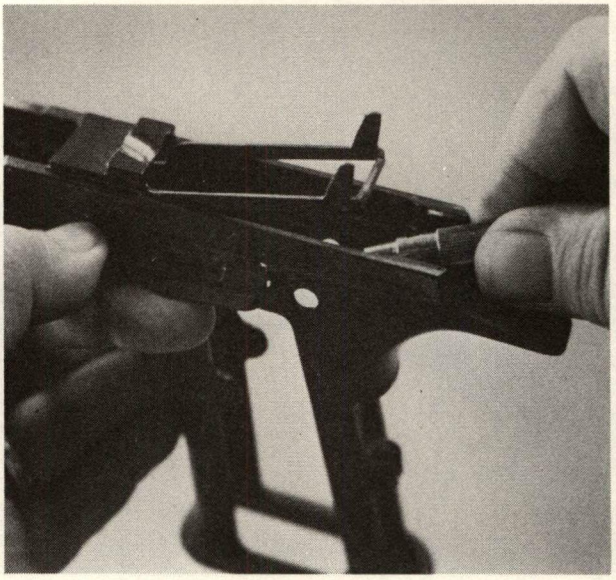


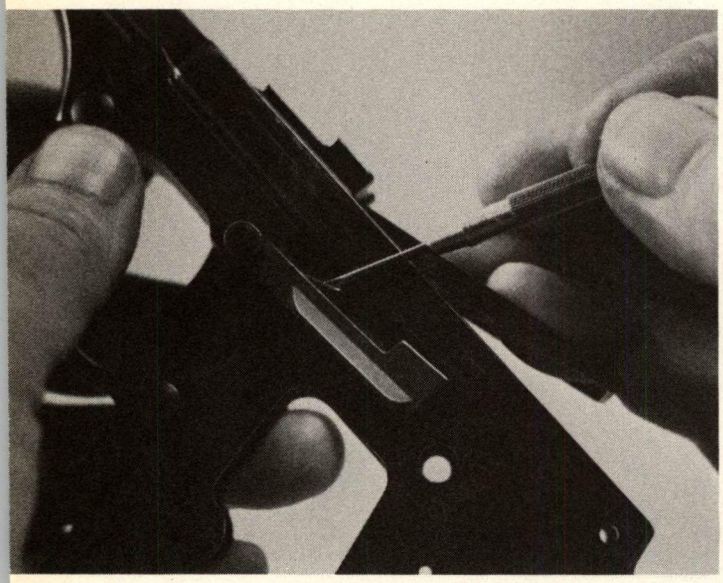
24. Drifting out the large roll pin in the lower part of the sub-frame will release the sear for removal upward.

25. Drifting out the small pin will release the sear spring. Note that the arms of the spring bear on the inside front of the sub-frame, and the closed loop of the spring bears on the sear.



26. Move the slide-latch to its upper position, and use a tool inside the frame to nudge it outward until its inner lug is even with the inside of the frame.

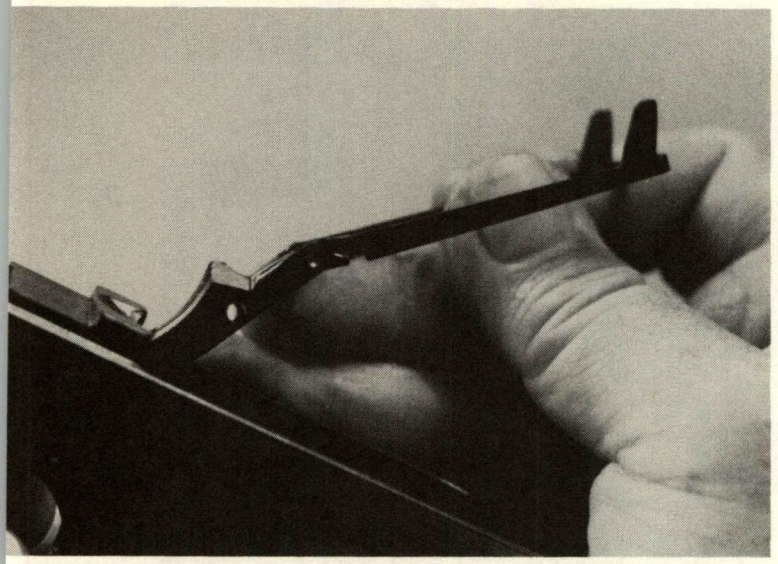




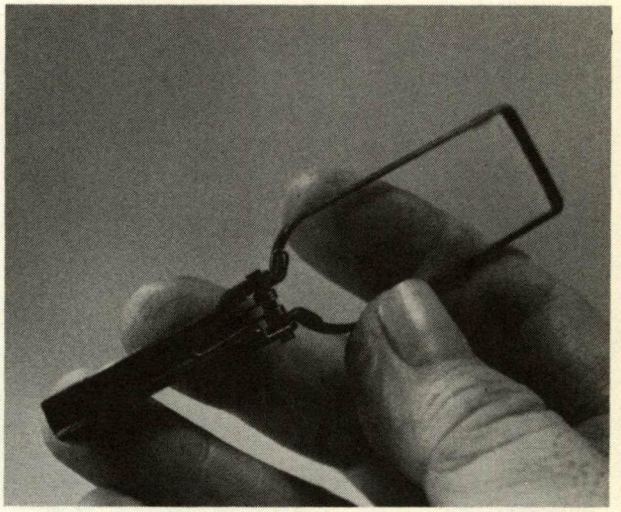
27. Insert a small screwdriver to unhook the turned-in upper arm of the slide-latch spring from its hole in the frame, and remove the spring upward. **Caution:** *The spring is under tension—control it.*

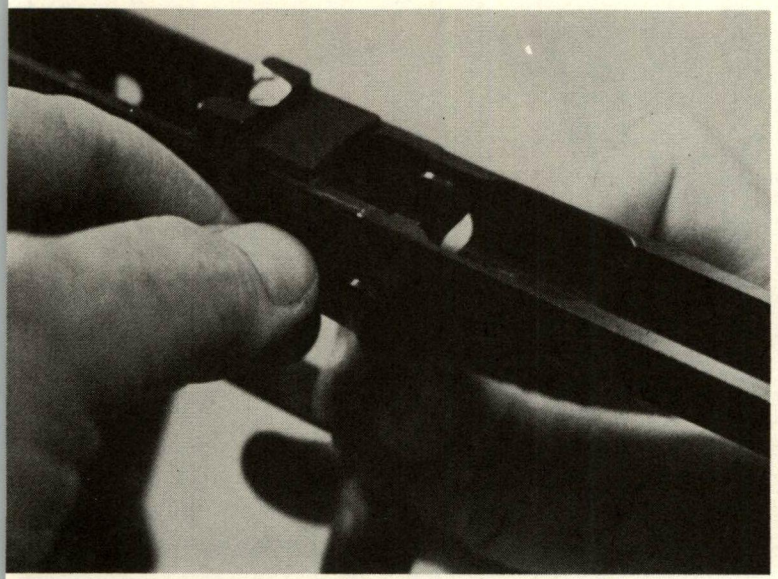
28. Remove the slide-latch toward the left.

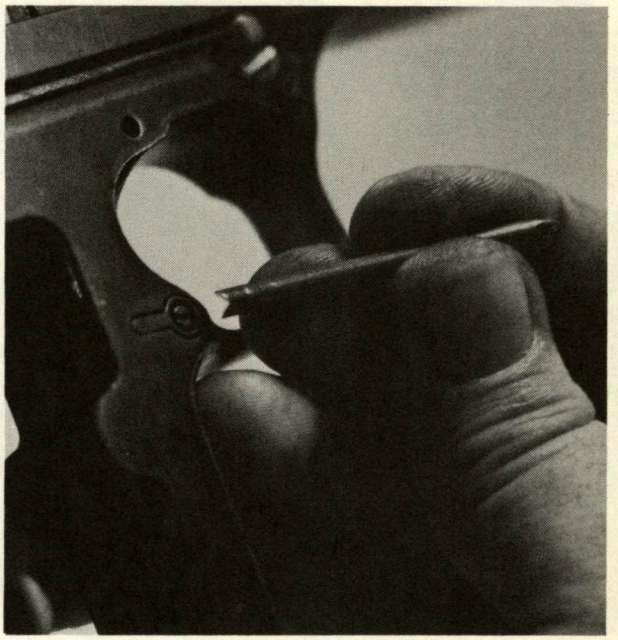
29. Remove the trigger and trigger bar assembly rearward and upward.



30. The trigger bar pin, which also retains the spring, is riveted on both ends. Unless it is necessary for repair, this assembly is best left in place.





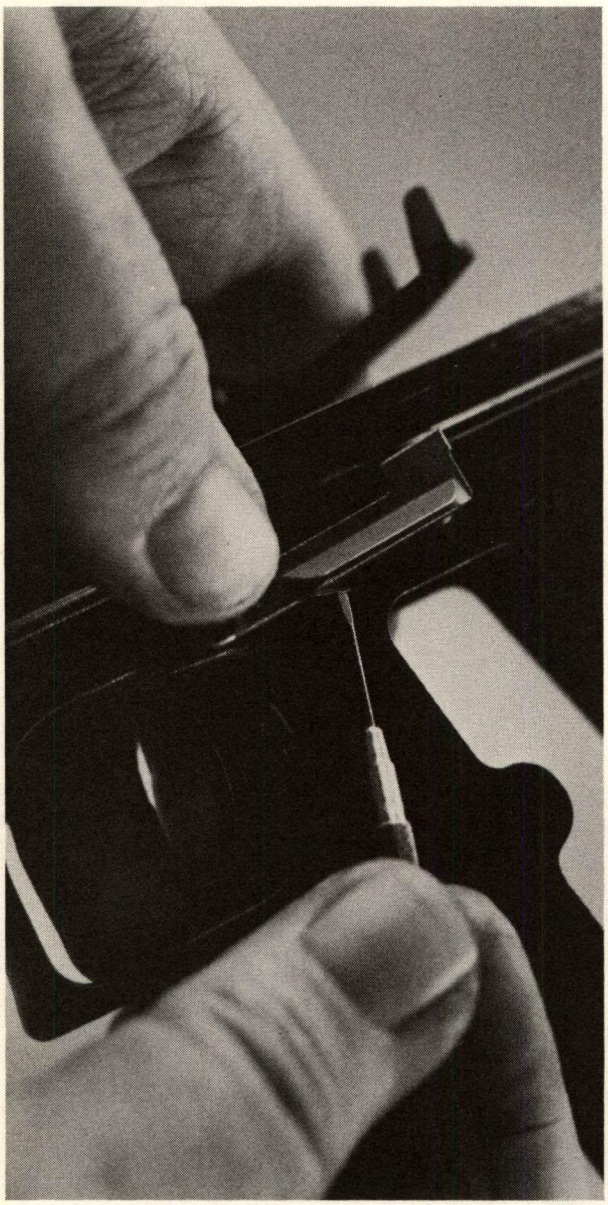


31. To remove the takedown-latch system, push the button beyond its usual depression with a wooden dowel or some other non-marring tool. With the lever in its locked position, tilt the lever as shown, and remove it toward the right. The button and spring are then taken out toward the left.

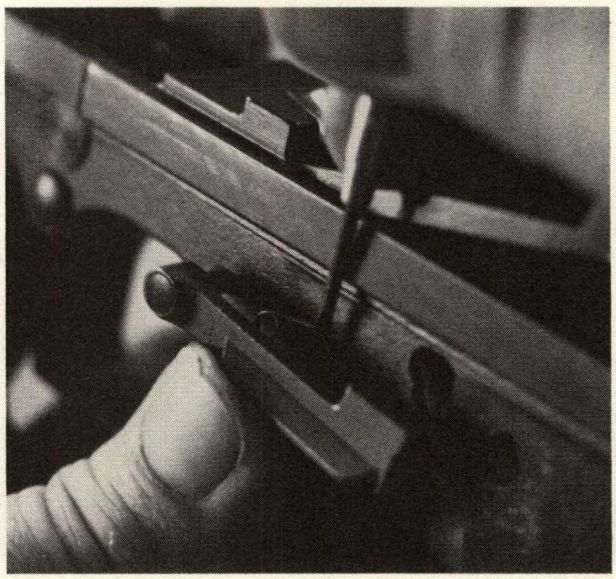
32. Removal of the magazine catch requires the use of a tool with a concave-bevel tip, as shown. This is easily made from a piece of steel rod or a nail of the right size. Set the tool on the tempered split end of the catch button, and give it a light tap with a small hammer. The button and spring are then taken off toward the left, and the catch piece toward the right.

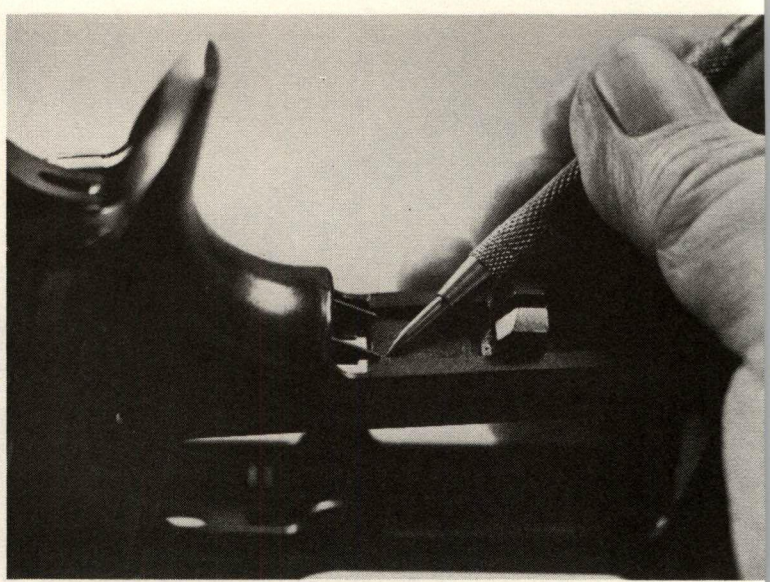
Reassembly Tips:

1. When the slide-latch is pushed in almost all the way, a very small screwdriver can be used to slip the tail of the latch spring upward until it drops into its groove in the latch.



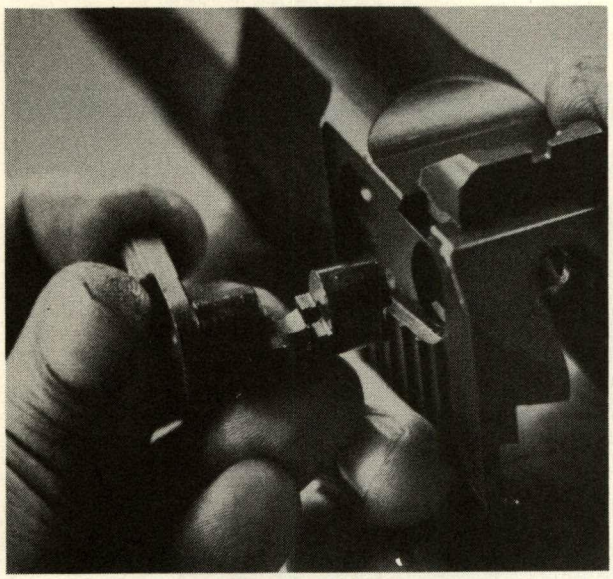
2. An alternative method for the same operation is to hook the spring into its hole in the frame, place the spring tail in the groove in the latch, and use a tool to hold the spring in engagement while the latch is pushed upward and inward.



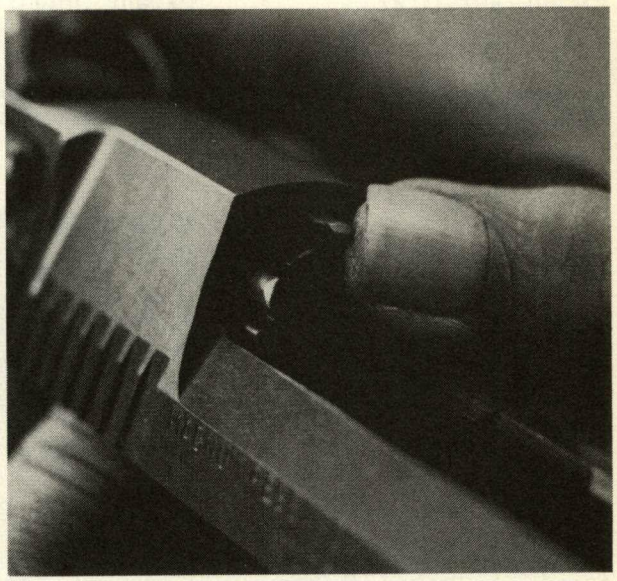


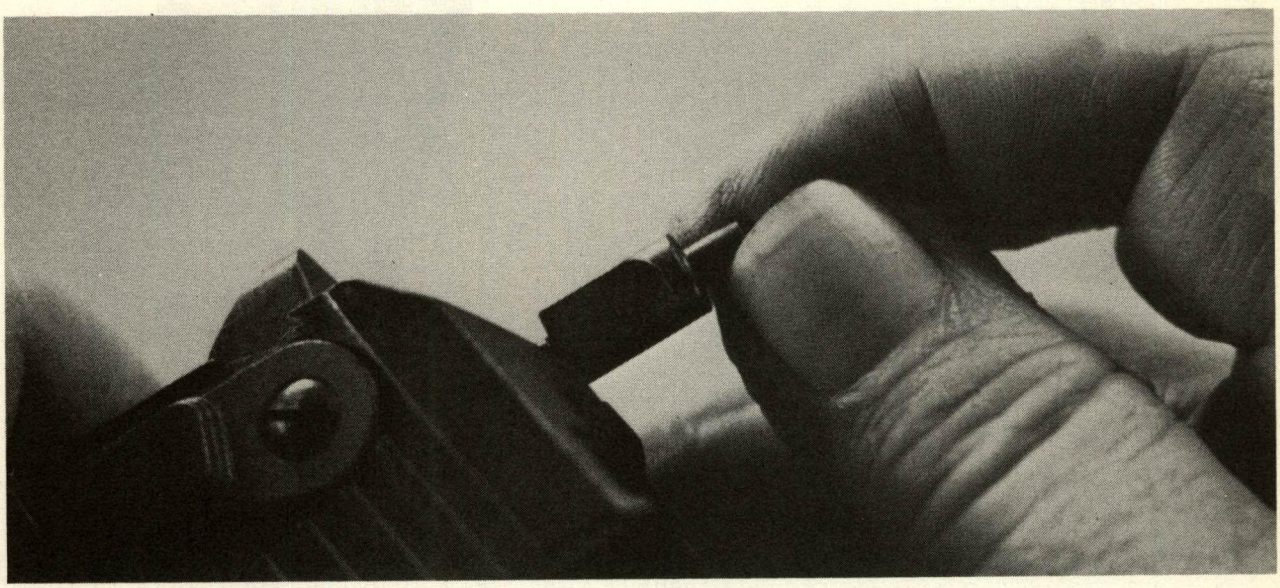
3. When replacing the hammer unit, be sure the lower pointed tips of the sub-frame are hooked on the frame, as shown.

4. If you have removed both safety-levers, be sure the cross-piece is oriented as shown when the unit is reinstalled.



5. When reinserting the bolt stop pin, be sure the bolt is in the position shown, with the extractor on the right side.





6. When the firing pin is installed, be sure the shelves on its head are in the position shown.

F.I.E. Super Titan II

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the F.I.E. Super Titan II also apply to the following guns.

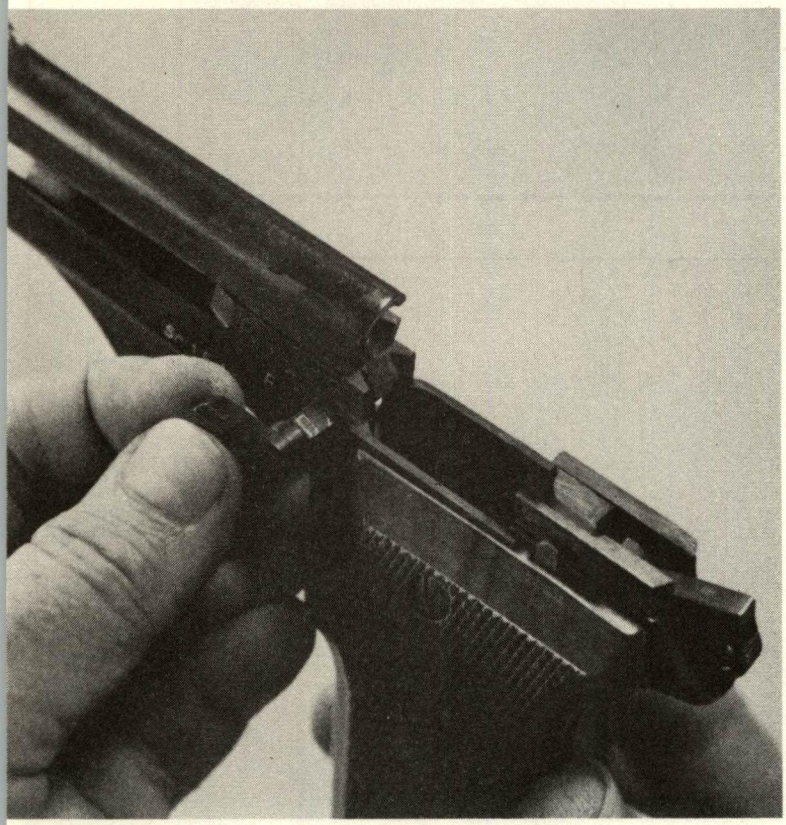
Excam Targa GT27
F.I.E. Titan
Excam Targa GT32
F.I.E. Titan II
Excam Targa GT380
F.I.E. Titan E27 25 ACP

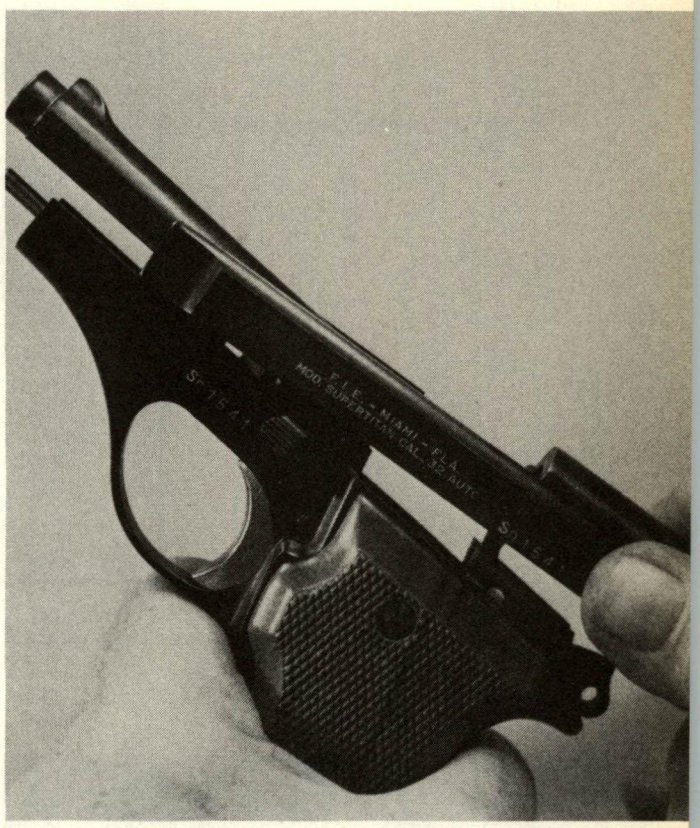
Data:	F.I.E. Super Titan II
Origin:	Italy
Manufacturer:	Fratelli Tanfoglio, S.p.A. Gardone, V. T., (Brescia)
Cartridge:	380 ACP, 32 ACP
Magazine capacity:	12 rounds (32) 11 rounds (380)
Overall length:	$6^{7}/_{8}$ inches
Height:	$5^{3}/_{8}$ inches
Barrel length:	$3^{13}/_{16}$ inches
Weight:	28 ounces

The brothers Tanfoglio make an assortment of good, solid small-frame and medium-frame single-action automatics. There are two principal U.S. importers—F.I.E. and Excam. When F.I.E. is the importer, the name used is "Titan." Excam uses the "Targa" trade name, and a "GT" prefix on the model number. As an example, the small 25 ACP by Excam is the GT27. F.I.E. calls the same gun the Titan E27. In various sizes, the pistols are available in 22 Long Rifle, 25 ACP, 32 ACP, and 380 ACP. There are some small mechanical differences, such as the presence or absence of a magazine safety, but all have the same basic mechanical design, and the instructions will apply.

Field Strip:

1. With the magazine removed and the hammer cocked, turn the manual safety on the frame up to on-safe position. Draw the slide all the way to the rear, lift it up at the rear, and ease the slide off toward the front. Remove the recoil spring and its guide toward the front.



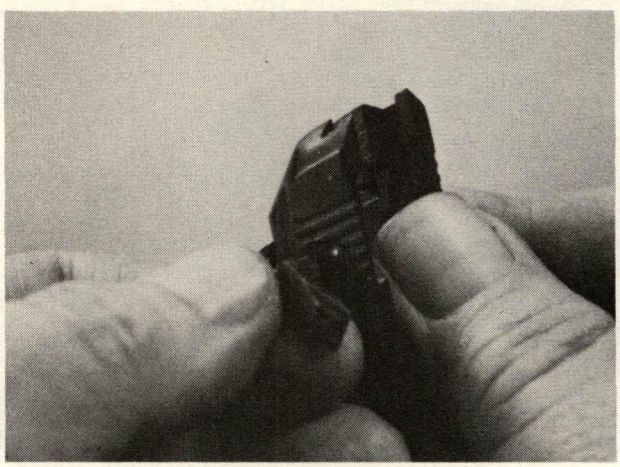


2. Remove the manual safety toward the left. **Gun is now field-stripped:**

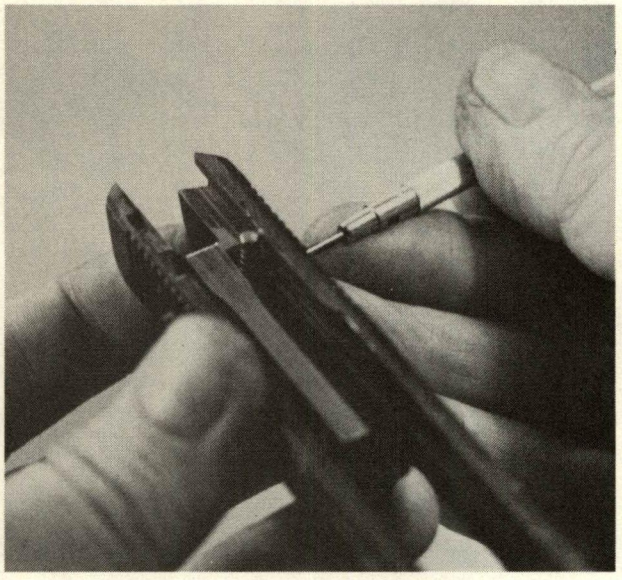
Super Titan II field-stripped

Detail Strip:

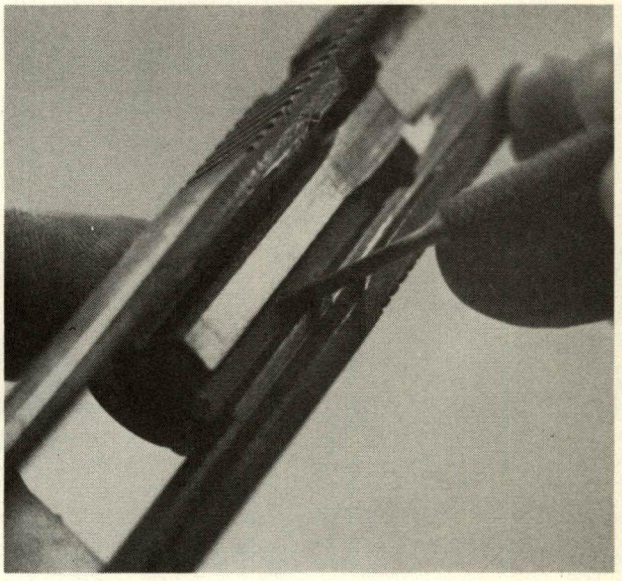
3. To remove the firing pin block safety from the slide, set it between its two positions, push on its tip on the right side, and pull the safety out toward the left. **Caution:** *The safety positioning plunger and its spring will be released downward on the right side of the slide, so keep a fingertip in the area, as shown, to catch it.*

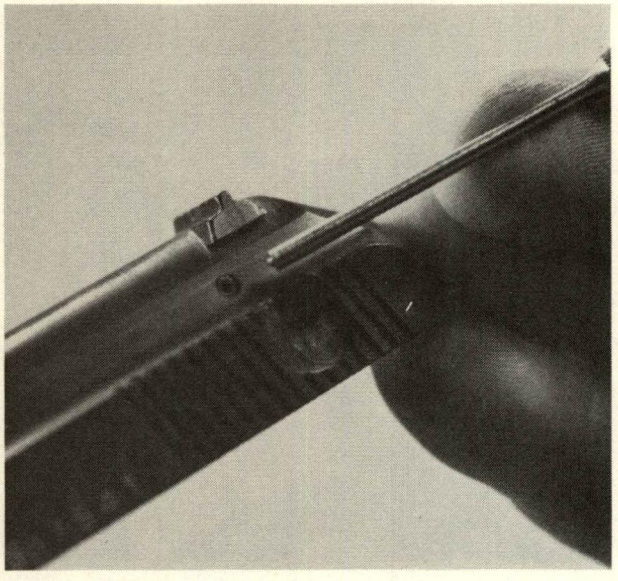


4. If the slide is turned to upright position, the safety plunger and spring will probably fall out into your hand. If not, they can be nudged out with a small tool for removal, as shown.

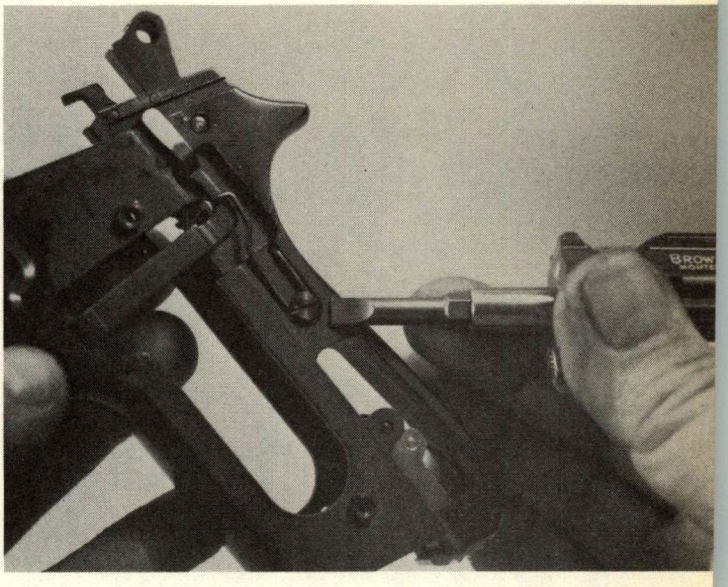


5. The extractor and its coil spring are retained and pivoted on the right side of the slide by a vertical pin. The pin is driven out upward, and the extractor and spring are taken off toward the right.



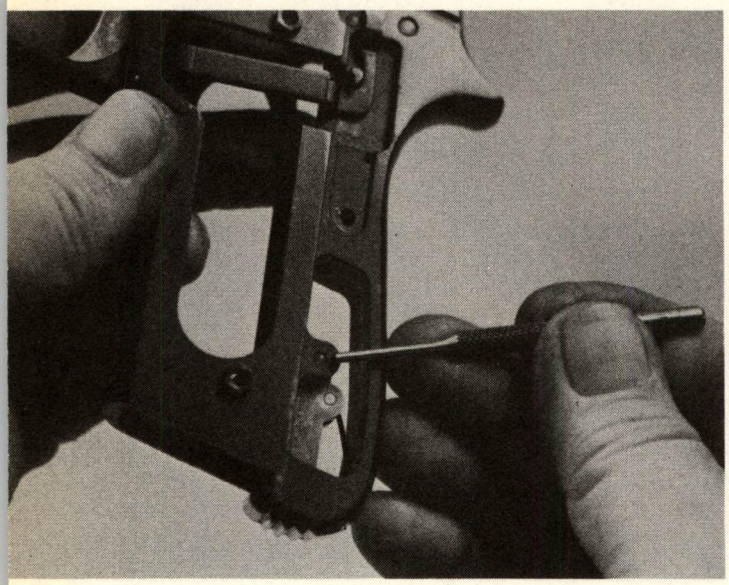


6. The firing pin is retained by a roll pin. Use a roll pin punch to drift it out toward either side, and remove the firing pin and its spring toward the rear.

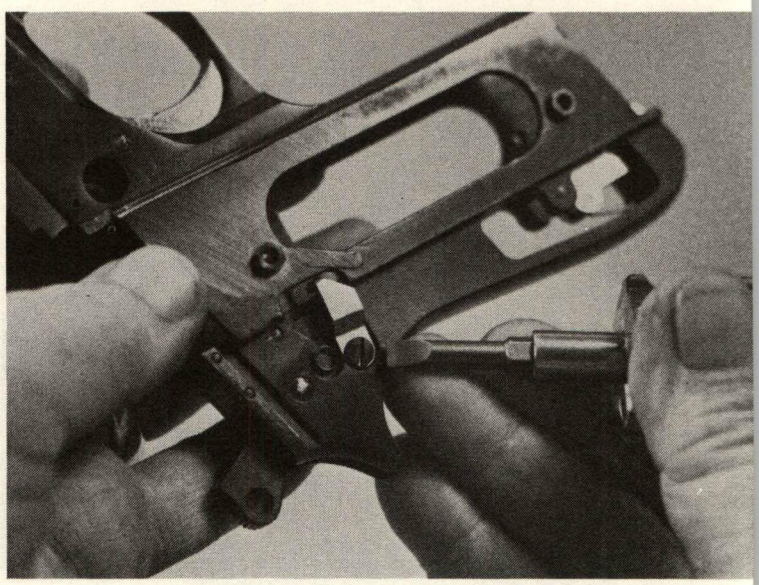


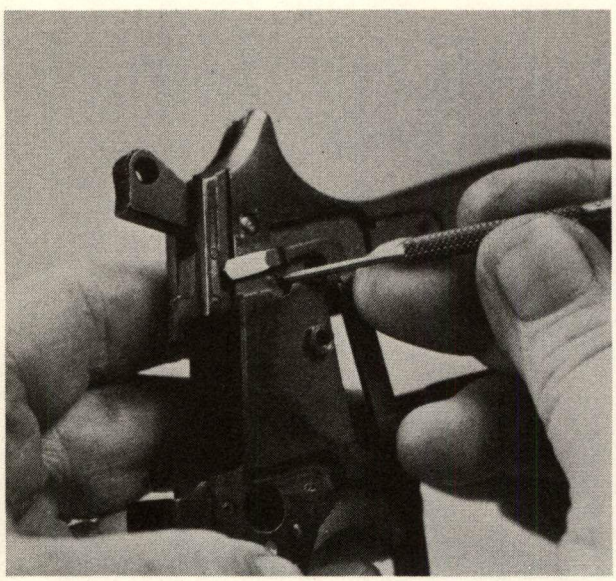
7. Remove the grip panels, using a screwdriver that is fitted to the wide and narrow slots. The sear spring is retained on the left side of the frame by a screw. Remove the screw, unhook the inner arm of the spring from its hole in the sear, and remove the spring toward the left. The trigger bar can be moved downward for clearance.

8. Drifting out the cross-pin in the lower part of the grip frame will allow the magazine catch assembly to be taken out downward. The spring is retained on the catch by a cross-pin, and this can be driven out for separation, if necessary.

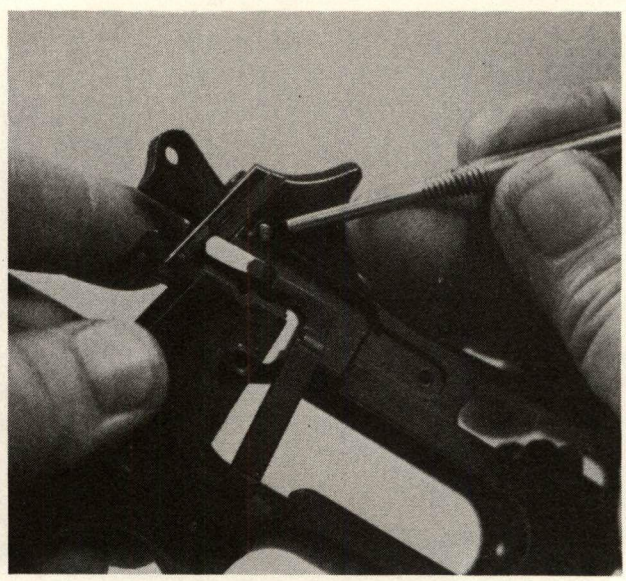


9. The magazine safety is retained on the right side of the frame by a screw. Removal of the screw will allow the magazine safety and its torsion spring to be taken off. Control the spring as the safety is removed.





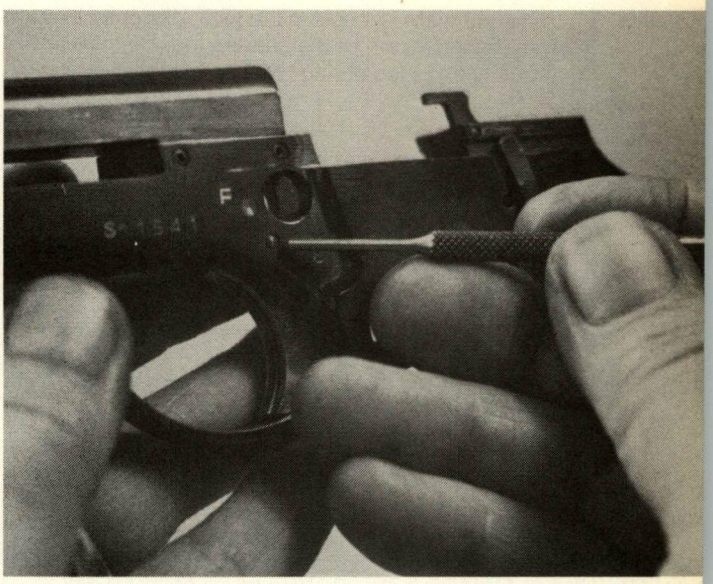
10. Drifting out the sear cross-pin will release the sear into the magazine well for removal. Again, the trigger bar can be moved down for clearance.

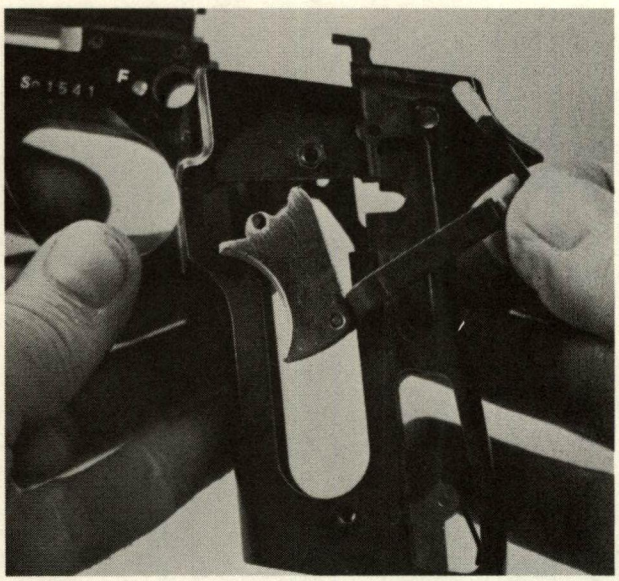


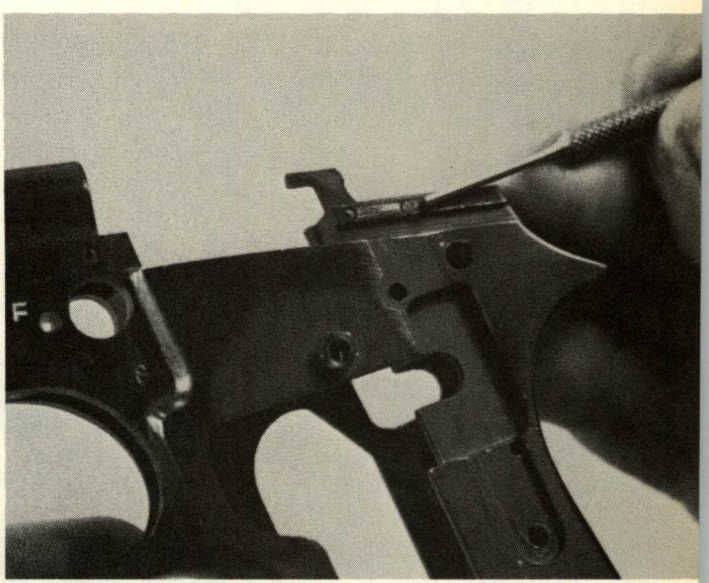
11. Drift out the hammer pivot pin toward the right. As the drift punch is withdrawn, exert downward pressure on the hammer, and ease it upward.

12. Remove the hammer, hammer strut, and spring upward. The strut is attached to the hammer by a roll pin, and this can be drifted out for separation, if necessary.

13. Drift out the trigger cross-pin toward the right.





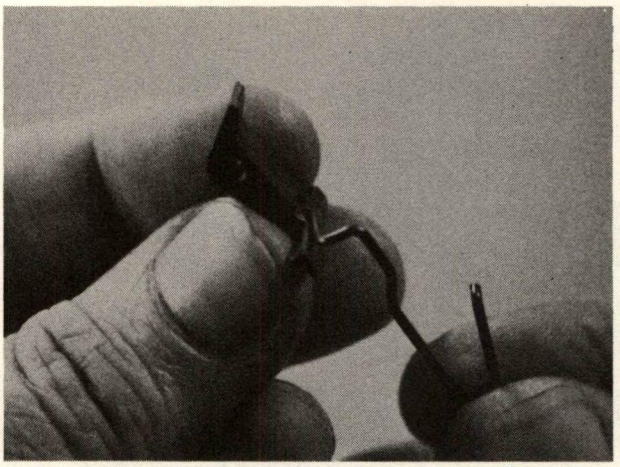


14. Move the trigger toward the rear. It will be necessary to slightly flex the trigger bar outward to clear the frame. Remove the trigger and trigger bar assembly toward the left. The bar is attached to the trigger by a cross-pin, and this can be drifted out for separation. **Caution:** *The trigger bar spring and plunger will be released at the bottom of the trigger, so control the bar and ease them out.*

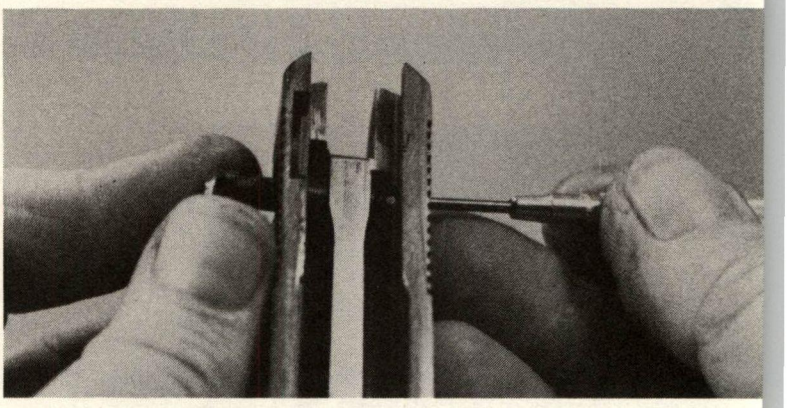
15. The ejector is retained in the top of the frame by two cross-pins. Drifting these out will allow the removal of the ejector upward. The barrel is also retained by two transverse roll pins, and it is removed upward. Unless it is necessary for repair, both of these parts are best left in place.

Reassembly Tips:

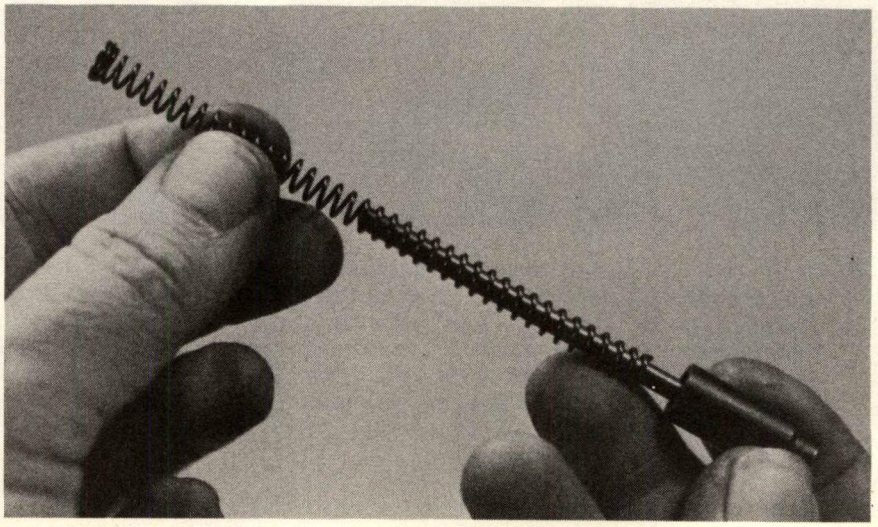
1. Note that there is a hole in the sear, designed to mate with the inner arm of the sear spring. Be sure this is properly engaged during reassembly.



2. When replacing the firing pin safety on the slide, remember to keep it in mid-position as it is put into place. Insert a small screwdriver to depress and hold the plunger and spring until the end of the safety holds it.



3. Note that the small end of the recoil spring goes toward the rear, to enter the sleeve on the guide, and the larger end goes at the front.



F.I.E. TZ75 Series 88

Identical Pattern Guns

The same basic assembly/disassembly steps for the F.I.E. TZ75 Series 88 also apply to the following guns.

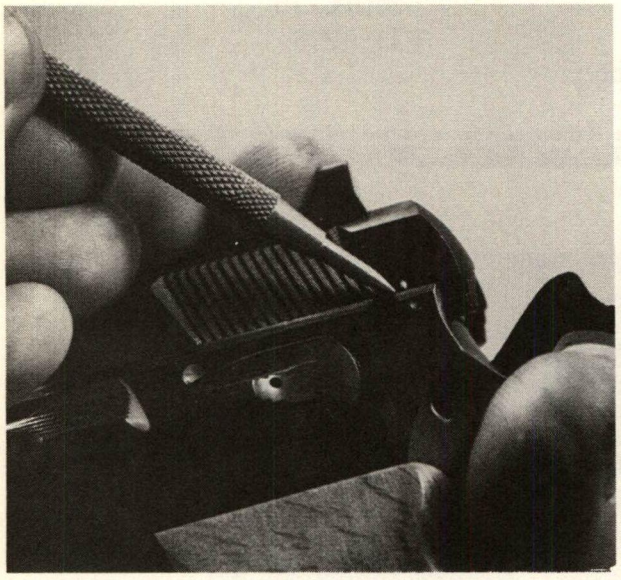
Action Arms AT84
Action Arms AT88
Czech CZ75
Excam TA90
Excam TA90 Baby
F.I.E. TZ75
Springfield Armory P9
Springfield Armory P9C

Data:	F.I.E. TZ75 Series 88
Origin:	Italy
Manufacturer:	Fratelli Tanfoglio S.p.A., Gardone V.T. (Brescia)
Cartridge:	9mm Luger
Magazine capacity:	15 rounds
Overall length:	8.12 inches
Height:	5 1/2 inches
Barrel length:	4 1/2 inches
Weight:	35 ounces

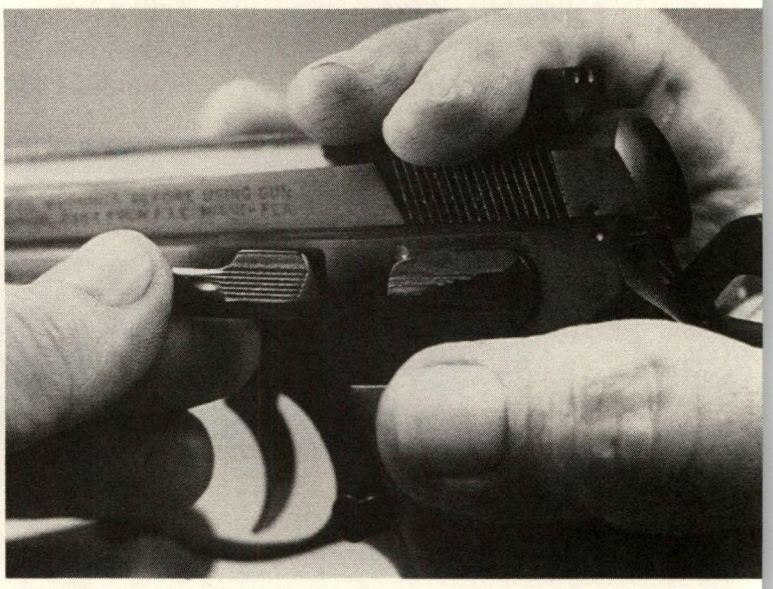
In 1983, the brothers Tanfoglio began producing an excellent copy of the famed Czech CZ75 pistol. The first production series had a slide-mounted firing pin safety, but otherwise it was mechanically the same as the CZ75. F.I.E. imported the gun as the TZ75, and Excam called it the TA90. A compact version was also made. In addition to the original CZ75, other guns which the instructions will cover are the Action Arms AT88 and the Springfield Armory P9, both of Tanfoglio origin. The current F.I.E. Series 88 pistol shown here is very close to the original Czech design. The few small differences will cause no difficulty in takedown or reassembly.

Field Strip:

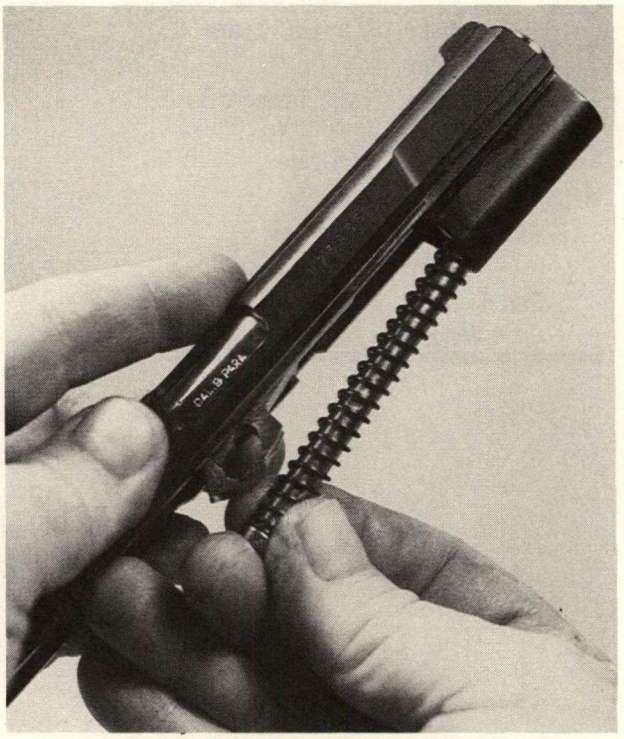
1. With the magazine removed and the hammer cocked, move the slide back until the stamped dots on the lower edge of the slide and the upper rear edge of the frame are aligned. (Note that on some pistols these reference marks may be vertical lines, or a line and a dot.)



2. With the slide held in that position, push on the right tip of the slide-latch cross-shaft, and remove the slide-latch toward the left.



3. Pull the trigger and gently lower the hammer to its fired position. Remove the slide and barrel assembly toward the front.



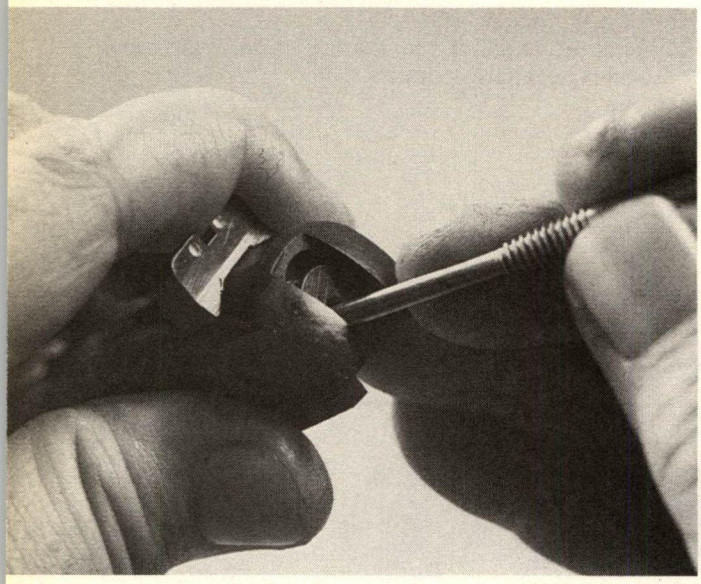
4. Disengage the rear tip of the recoil spring guide from the underlug of the barrel, and remove the guide and spring toward the rear. **Caution:** *The spring is under tension—control it.*

5. Remove the barrel from the underside of the slide. **Gun is now field-stripped.**

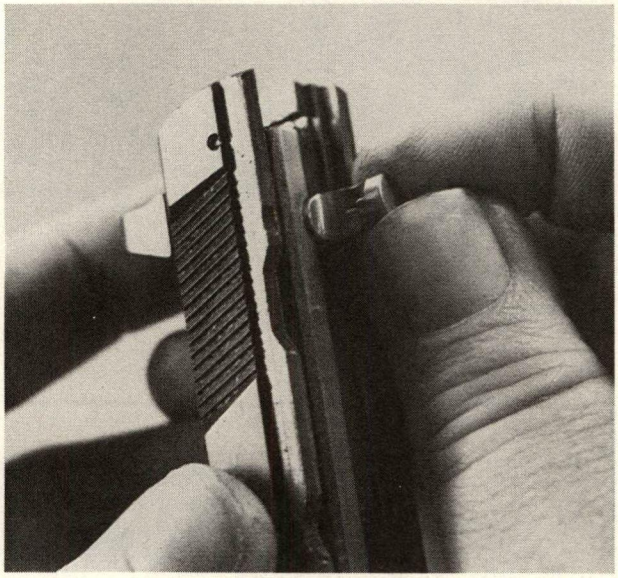
TZ75 Series 88 field-stripped

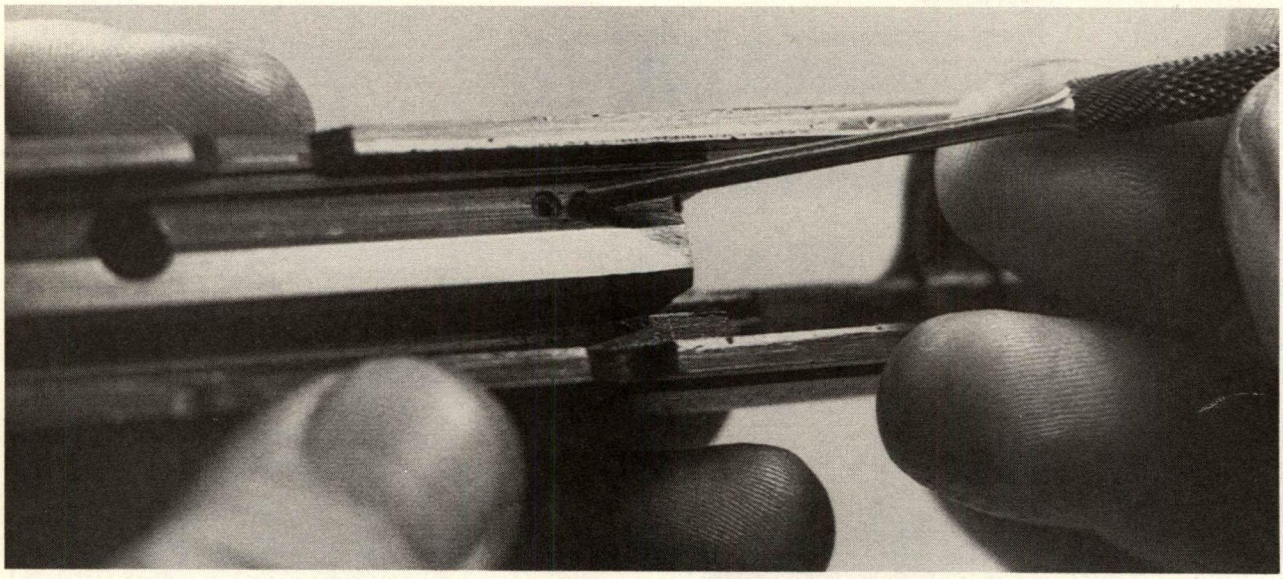
Detail Strip:

6. Depress the firing pin head with a tool, and move the retaining plate downward. **Caution:** *The spring is under tension, so control it.* Remove the firing pin and its spring toward the rear.



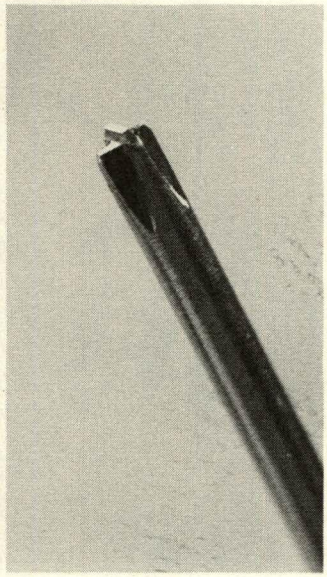
7. Removal of the firing pin will release the firing pin safety lock for removal from the underside of the slide, along with its small coil spring. Note the orientation of the lock piece as it is taken out, to facilitate proper reassembly.

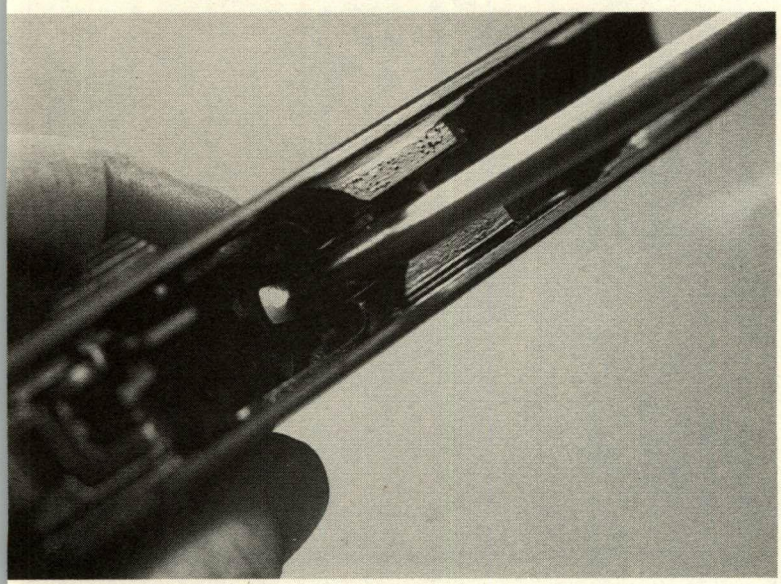




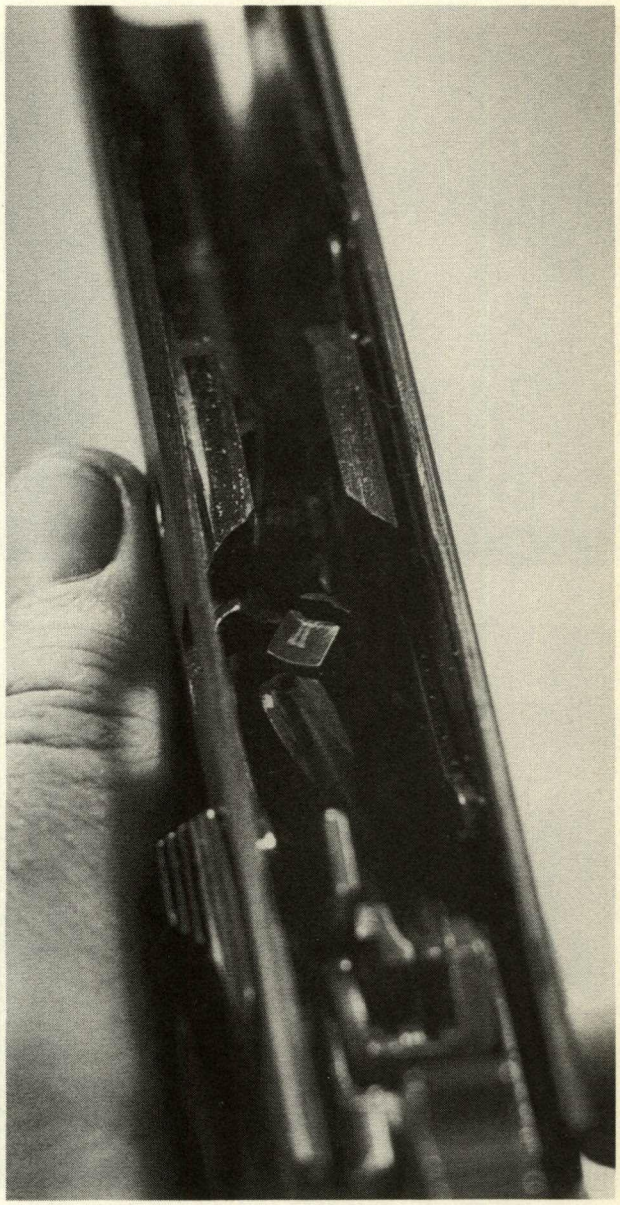
8. The extractor and its coil spring are retained and pivoted on the right side of the slide by a vertical roll pin. This is best driven out upward, and the extractor and spring are taken off toward the right.

9. The magazine catch is reversible for left-handed shooters. Removal requires the depression and rotation of a plunger called the trigger bar guide, located inside the frame behind the trigger. This can be done by using two small tools, but the best way is to alter an old Phillips screwdriver to the configuration shown.



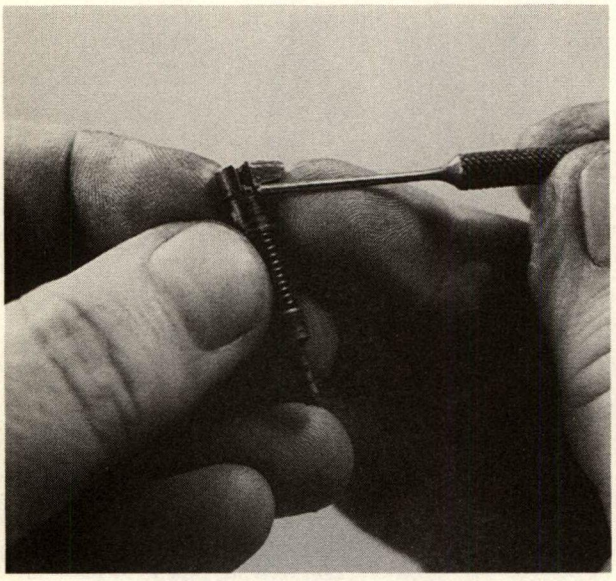


10. Depress the trigger bar guide, and turn it 180 degrees (a half-turn) in either direction, so its extension is pointing back toward the rear.

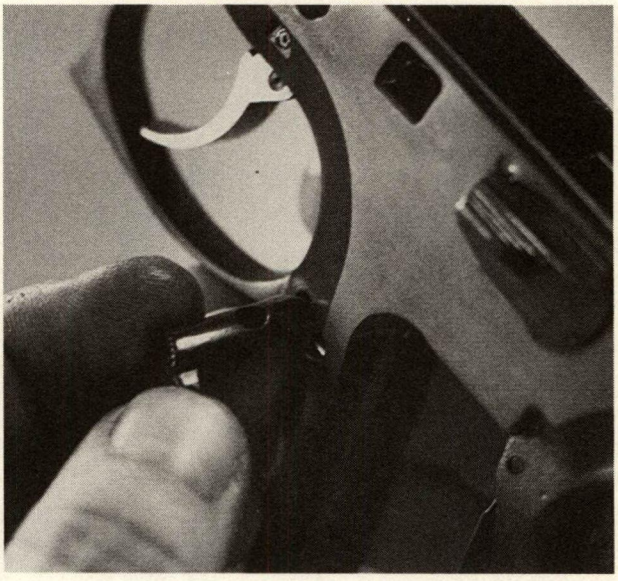


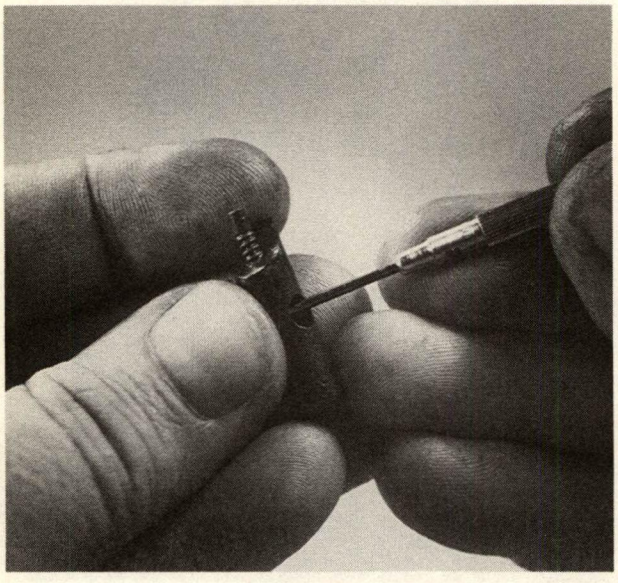
11. Hold a fingertip over the hole in the blank side of the magazine catch, and lift the trigger bar guide with a tool until it can be taken out upward The fingertip will prevent escape of the magazine catch plunger and spring as they are freed by the lower tip of the guide.

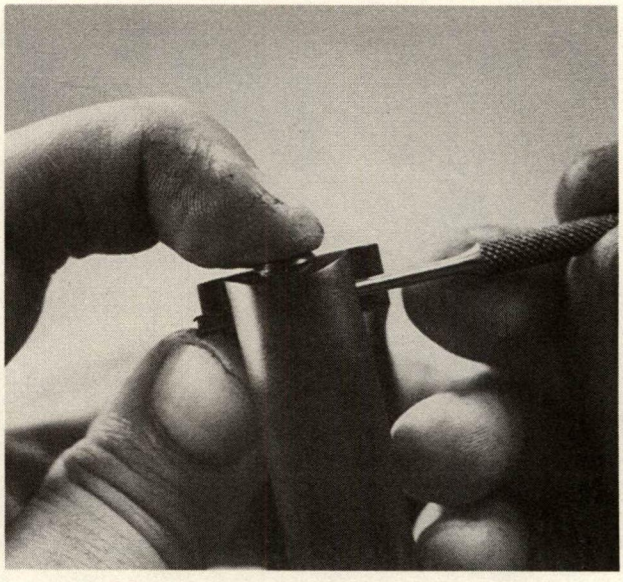
12. The head of the trigger bar guide is attached to its guide rod by a small roll pin at the top, and it can be separated by driving out this pin. In normal takedown, this is best left in place.



13. Remove the magazine catch toward the left.



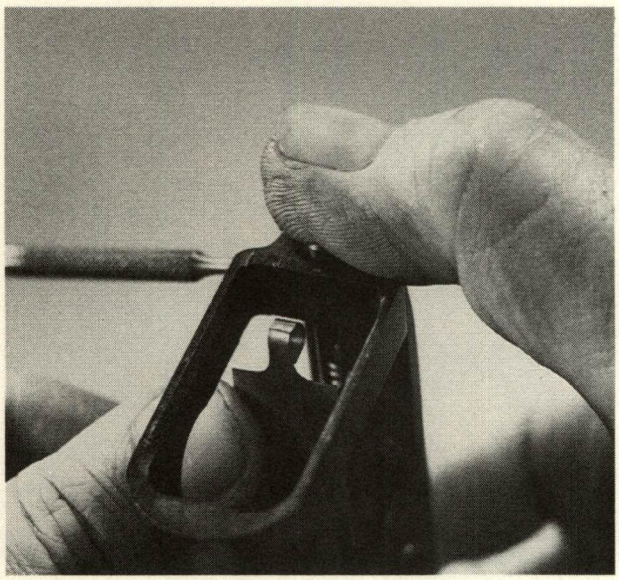




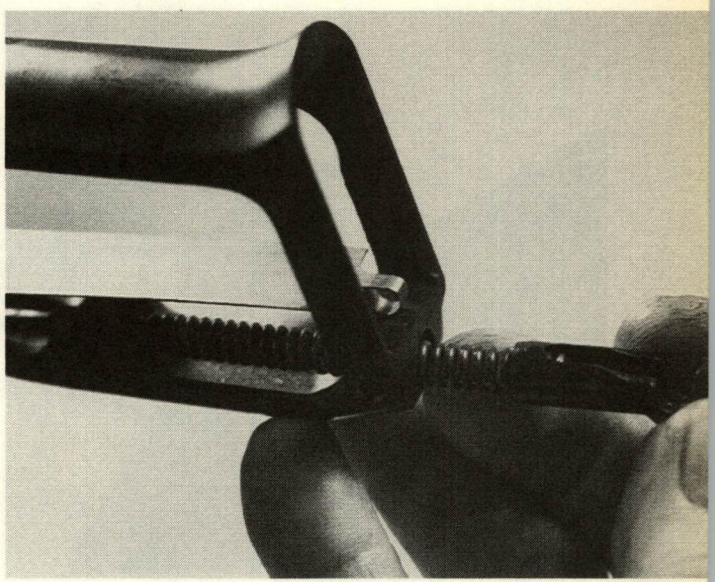
14. The internal plunger and spring in the magazine catch can be removed by using a small tool to nudge them out the access hole. If they are not removed, take care that they don't fall out and become lost in handling of the catch.

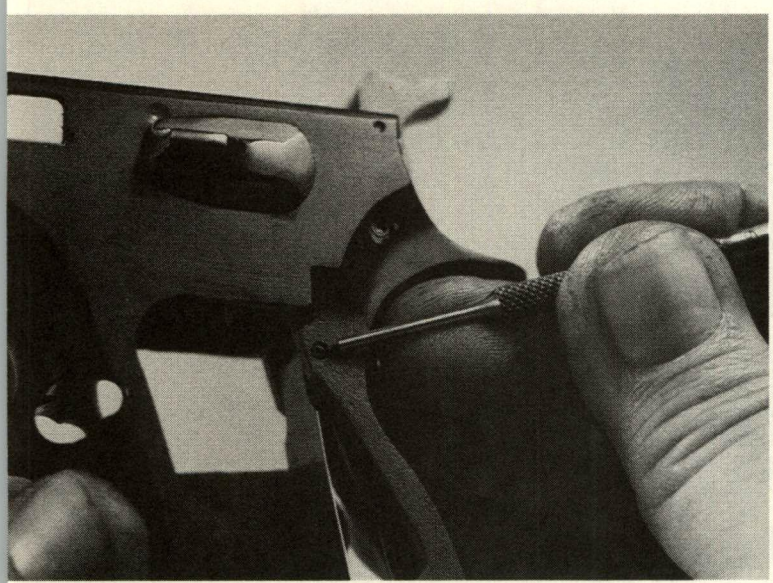
15. Drift out the large cross-pin at the lower rear of the grip frame. **Caution:** *The mainspring is under tension. Be sure the hammer is in the fired position, and restrain the hammer spring base or cup at the bottom of the grip as the drift punch is taken out.*

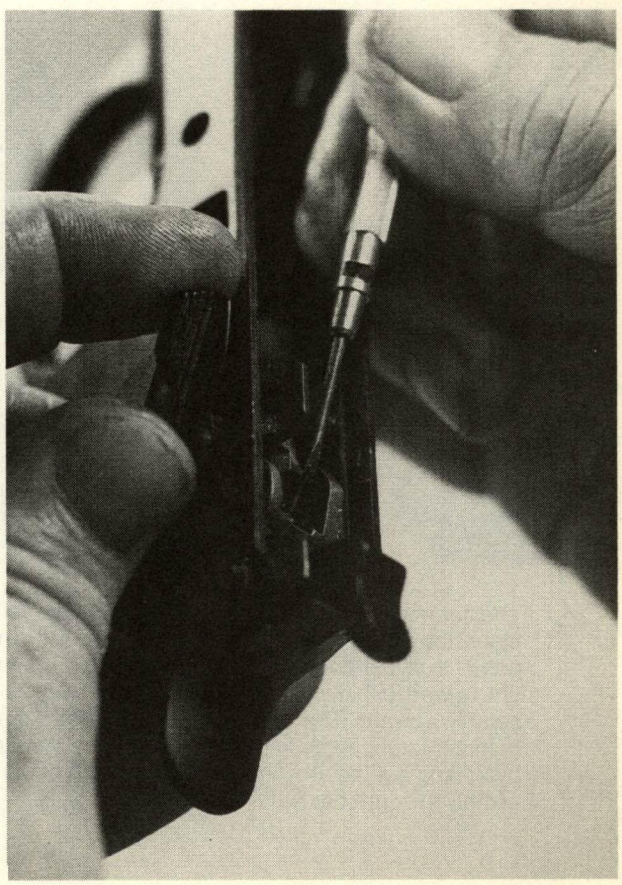
16. Partially withdraw the drift, until it will hold the cup in place but will free the center, and flex the magazine friction piece out of its lower engagement.



17. Restrain the spring base, remove the drift punch, and ease out the base and the mainspring downward.



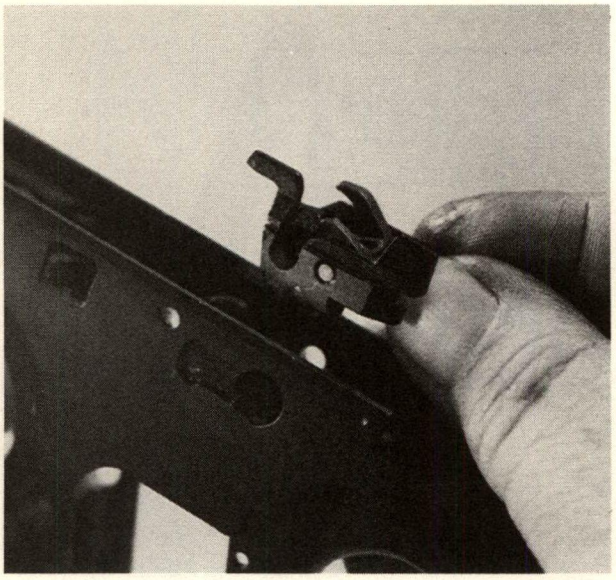




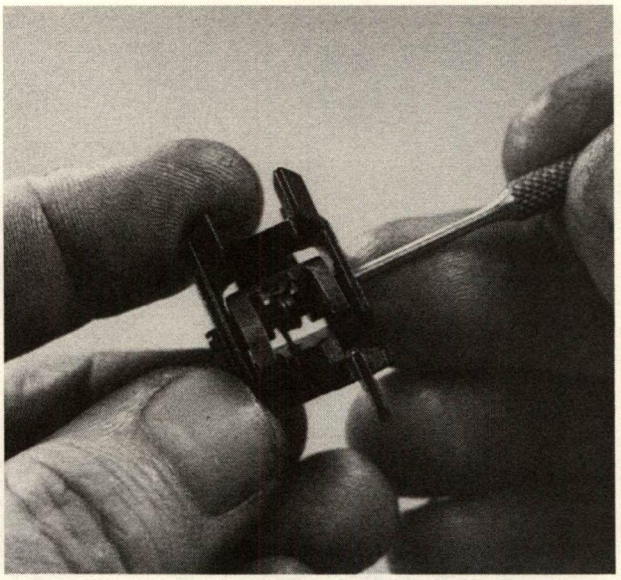
18. Push out the small cross-pin at the top, and remove the magazine friction piece downward.

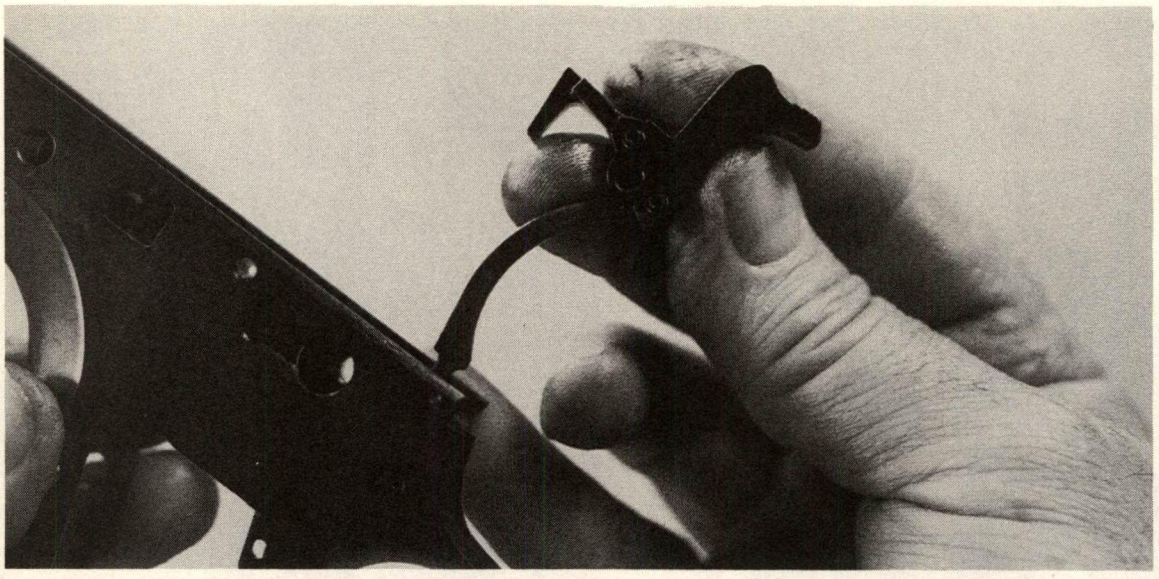
19. With the safety in on-safe position, use a small screwdriver to lift the front arm of the sear spring out of its groove in the safety shaft, and move the safety out toward the left. **Caution:** *As the safety comes out, the safety detent plate and its spring may be released. Restrain these small parts, and take care that they are not lost.*

20. Remove the sear and ejector sub-frame upward.



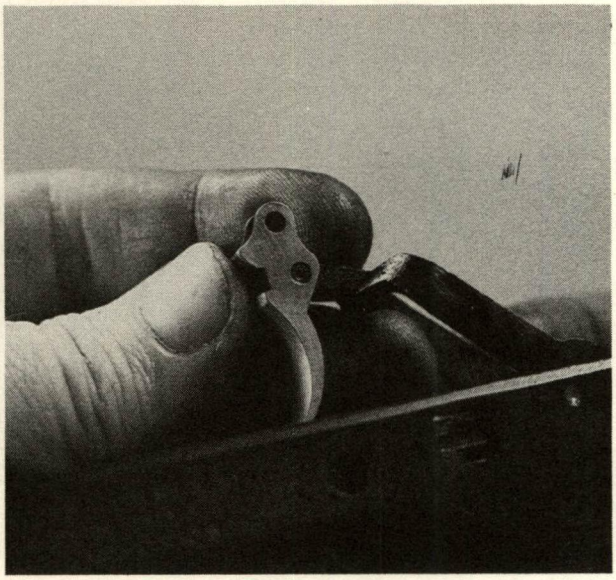
21. Pushing out the cross-pin in the sub-frame will release the sear and its torsion-type spring for removal. **Caution:** *The spring is under tension.* Note its orientation before removal, for proper reassembly.



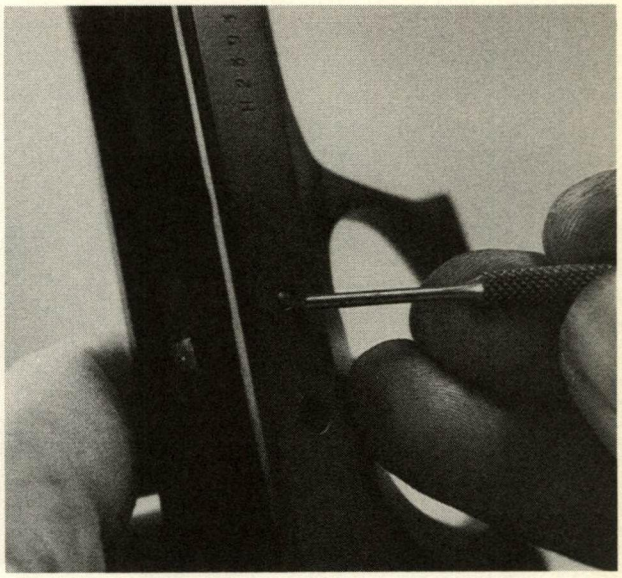


22. The hammer is pivoted and retained by a large roll pin in the upper rear of the frame. Use a roll pin punch to avoid deformation of the pin, and drift it out toward either side Remove the hammer assembly upward. The double-action lever and the hammer strut can be separated from the hammer by drifting out the cross-pins, but in normal disassembly they are best left in place.

23. Use a roll pin punch to drift out the trigger cross-pin. **Caution:** *As the drift is removed, the trigger spring will be released, so control it.* Remove the trigger and the attached trigger bar upward. Drifting out the small roll pin will allow separation of the trigger and trigger bar. In normal takedown, they are best left together.

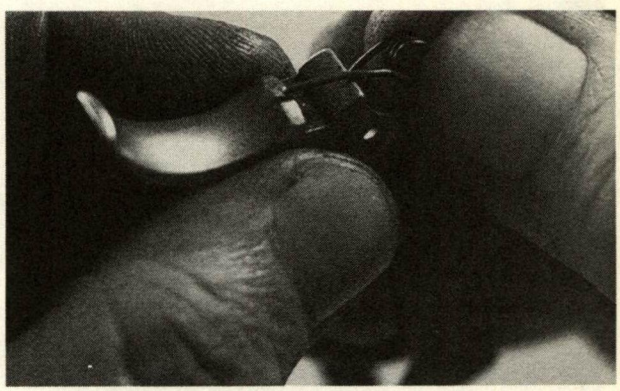


24. The slide stop spring is retained inside the right side of the frame by a short cross-pin that is removed by driving it inward, toward the left. Because of the possibility of marring, it is best to leave this in place unless repair is necessary.

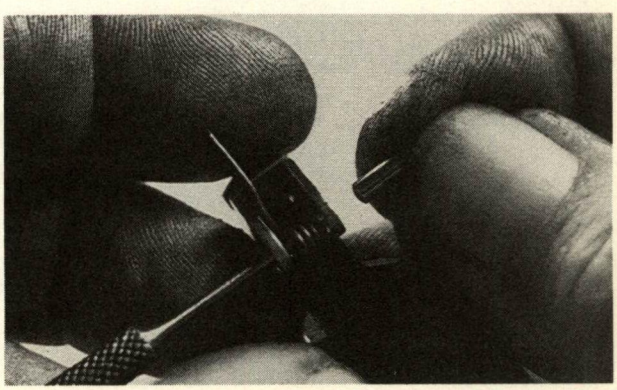


Reassembly Tips:

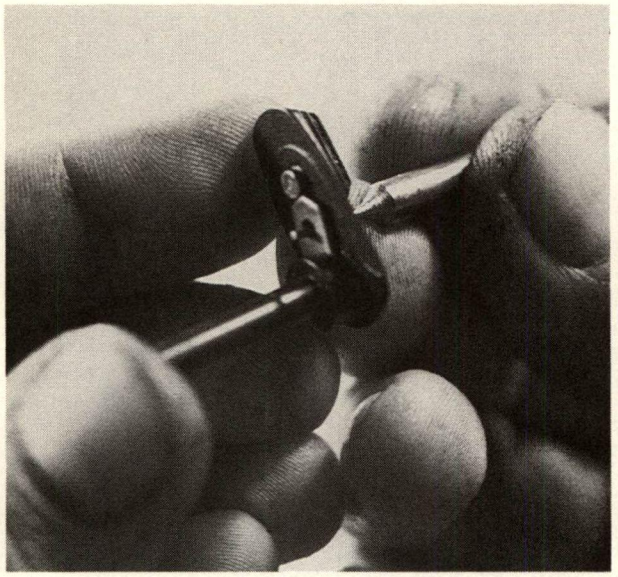
1. To prepare the trigger system for reassembly, begin by putting the short arm of the spring inside the front of the trigger, as shown. A slave pin will be necessary for the next step.



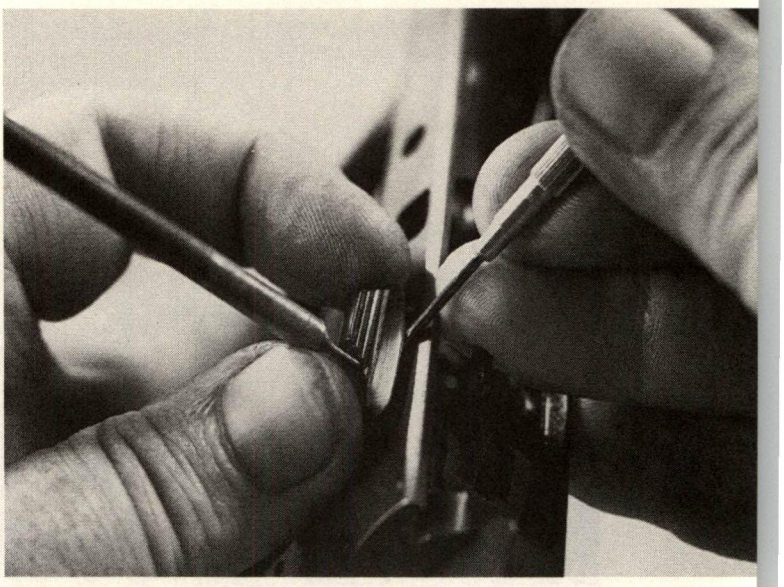
2. Turn the spring and push it into position for insertion of the slave pin, to hold the spring in place during replacement of the cross-pin.

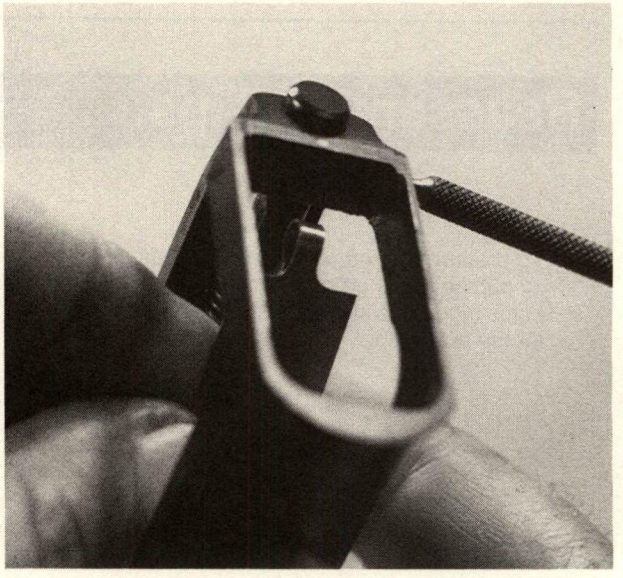


3. There is an access hole in the safety-lever for insertion of a small drift punch to hold the spring and detent plate in place while the shaft of the safety is pushed back into the gun.



4. As the safety shaft is pushed in, the tip of the sear spring must be lifted again (as it was during disassembly) for passage of the shaft. As the lever nears the frame, use a very small tool to position the detent plate so it will enter its recess in the frame.





5. When replacing the magazine catch, insert a small tool to depress its plunger and spring as the trigger bar guide is reinserted and turned into locked position.

6. When installing the hammer spring base, insert a drift punch just far enough to retain it, with the center clear for reinsertion of the lower loop of the magazine friction piece. When that is in position, move the drift in to catch it, then drive in the cross-pin, forcing out the drift. Be sure the parts are properly aligned.

Galesi 25

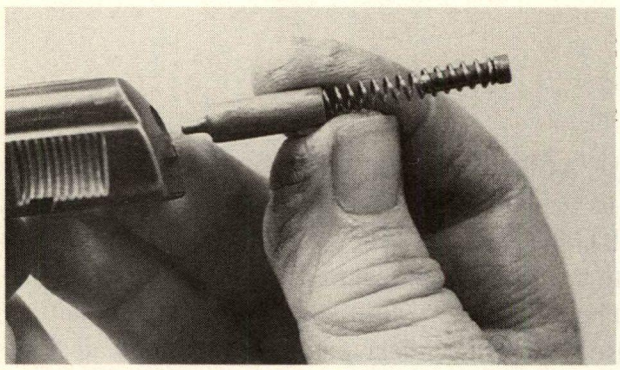
Data:	Armi Galesi Model 9
Origin:	Italy
Manufacturer:	Industria Armi Galesi, Collebeato (Brescia)
Cartridge:	25 ACP
Magazine capacity:	7 rounds
Overall length:	$4^{9}/_{16}$ inches
Height:	$3^{5}/_{16}$ inches
Barrel length:	$2^{5}/_{16}$ inches
Weight:	12 ounces

In the days before 1968, when "Big Brother" decreed that we were to be denied access to neat little foreign pistols, the small Galesi automatics were a popular import. In addition to the 25, an identical pistol in 22 caliber was also offered. There was a very similar gun imported at the time which also bore the Galesi name, the Rino Galesi by Rigarmi, but that one was not up to the high quality of the Armi Galesi, and internally they were quite different.

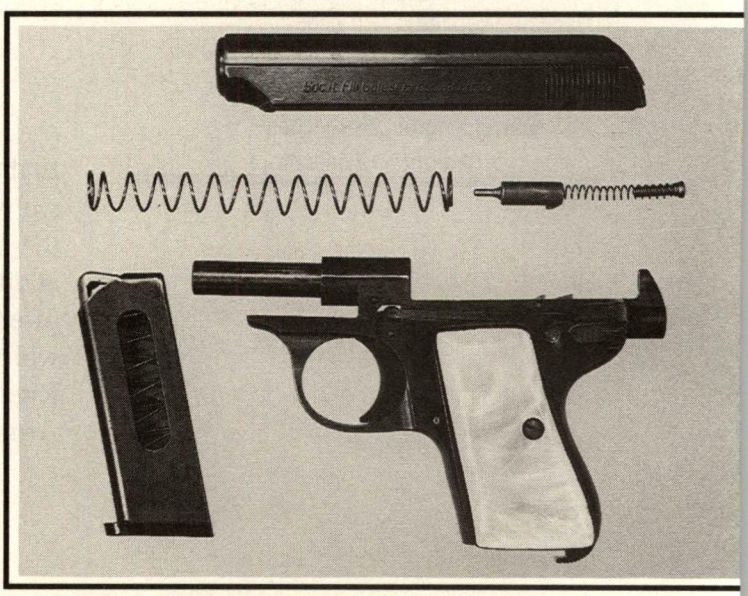
Field Strip:

1. With the magazine removed, push the slide toward the rear until the safety cut in its lower edge aligns with the pivot point of the safety lever. Turn the safety-lever all the way around toward the rear, releasing the combination takedown-latch and striker spring base. If the base is tight and fails to move out, pull back the slide to apply pressure from the striker spring.

2. Move the slide about 1/8-inch to the rear of its normal closed position, and lift it up at the rear to clear the top of the barrel. Run the slide forward off the barrel and frame.



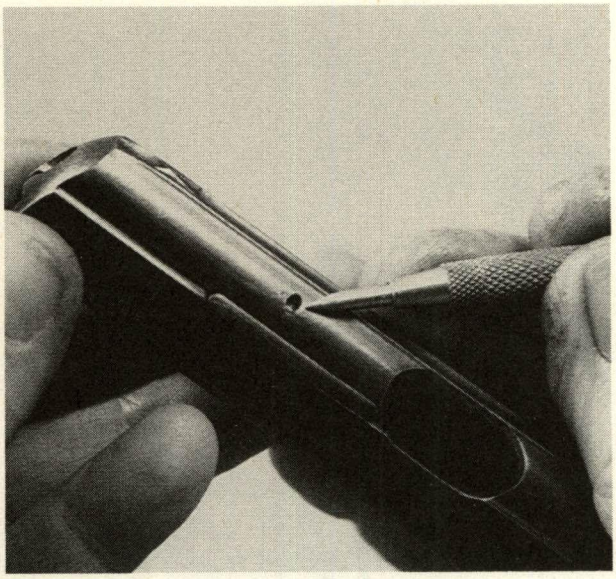
3. Remove the striker (firing pin), striker spring, and spring guide from the rear of the slide. Remove the recoil spring from the barrel. **Gun is now field-stripped.**



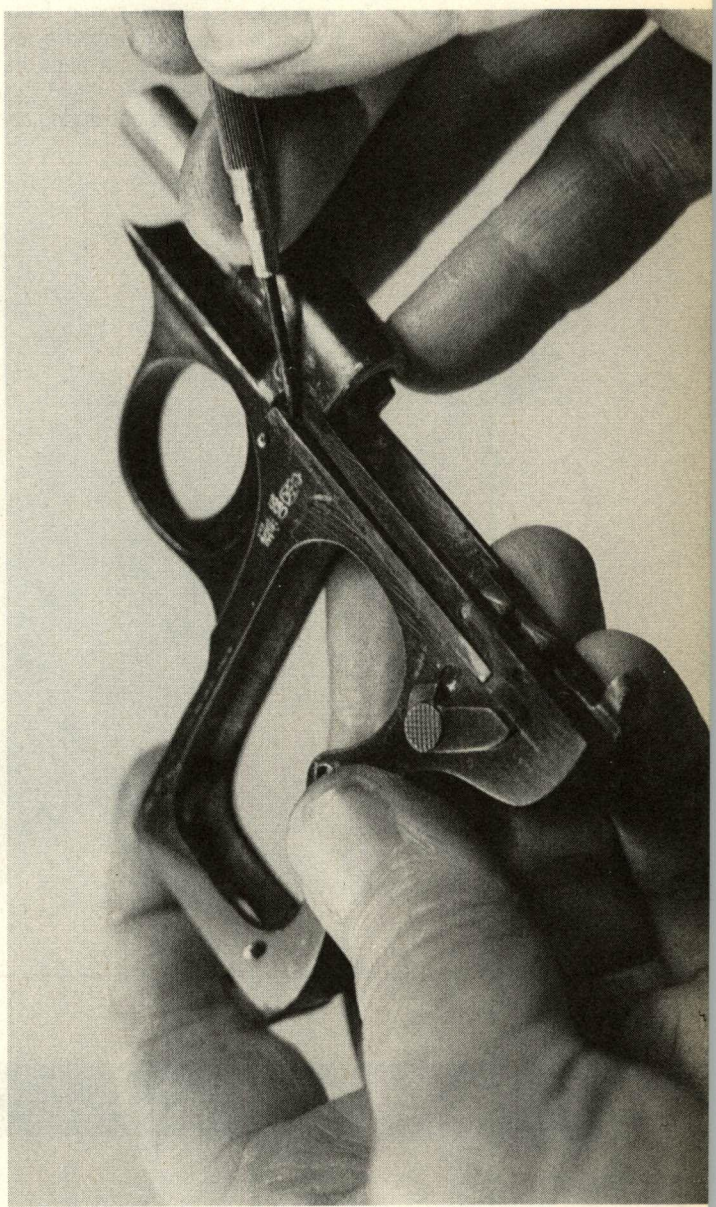
Galesi 25 field-stripped

Detail Strip:

4. Drifting out the vertical pin in the slide will release the extractor and its spring for removal.

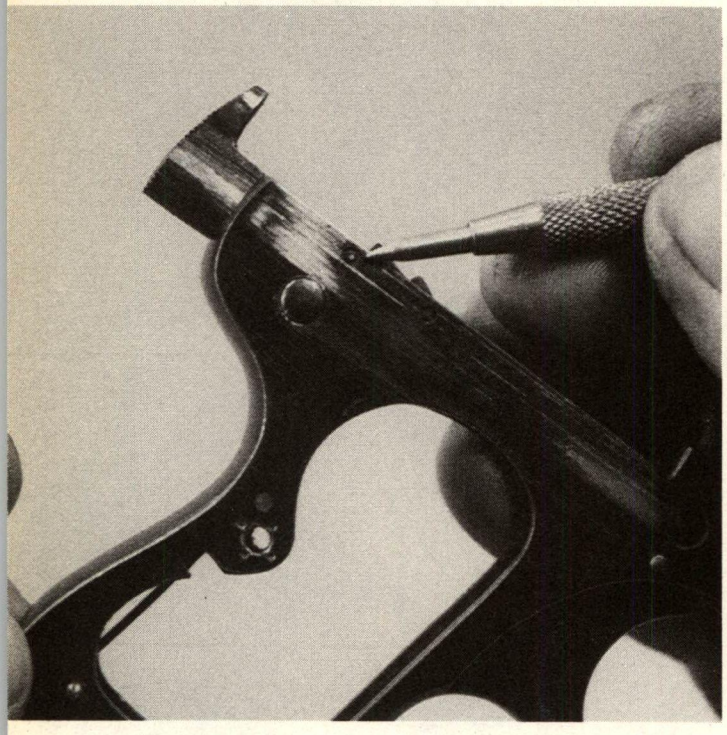


5. With a small tool, lift the trigger bar from its long recess on the left side of the frame, and remove it.

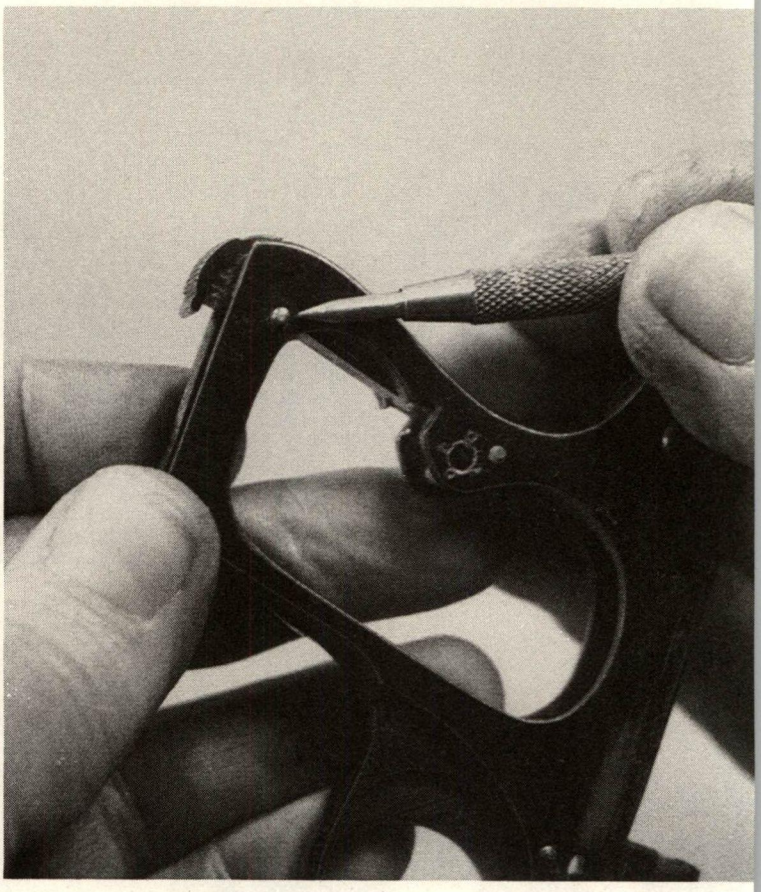


6. The trigger and its spring are retained by a cross-pin, and removal is by turning the trigger down and forward into the interior of the guard. The barrel is also cross-pinned in place, and routine removal is not advisable.

7. The small pin at the upper rear of the frame is the sear limit pin. It holds no part, but must be taken out if the sear, safety spring and plunger are to be removed. The other pin at the top of the frame is drifted out to release the sear and disconnector. Note the relationship of these parts as they are taken out of the frame, to make reassembly easier. The small pin at the rear center of the grip frame, near the grip screw hole, retains the twin-bladed spring which powers the sear and disconnector. To remove the safety, turn it straight down and pull it out toward the left. To remove the striker spring base, depress the safety spring plunger by inserting a tool through the safety shaft hole, and pull the base out toward the rear. After the sear, disconnector, and sear limit pin are removed, the safety plunger and spring can be lifted out the top of the frame.



8. The lower of the two pins at the bottom rear of the grip frame is the magazine catch limit pin, while the upper pin is the magazine catch pivot. Drifting these out will release the magazine catch. The lower end of the sear/disconnector spring powers the magazine catch.



Reassembly Tips:

When replacing the combination spring which powers the sear, disconnector, and magazine catch, be sure that its ends are against the front surfaces of these parts.

When replacing the striker spring base and the safety, depress the safety spring and plunger by inserting a small tool into the safety shaft hole on the right side and levering the plunger downward.

Glock 17

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Glock 17 also apply to the following guns.

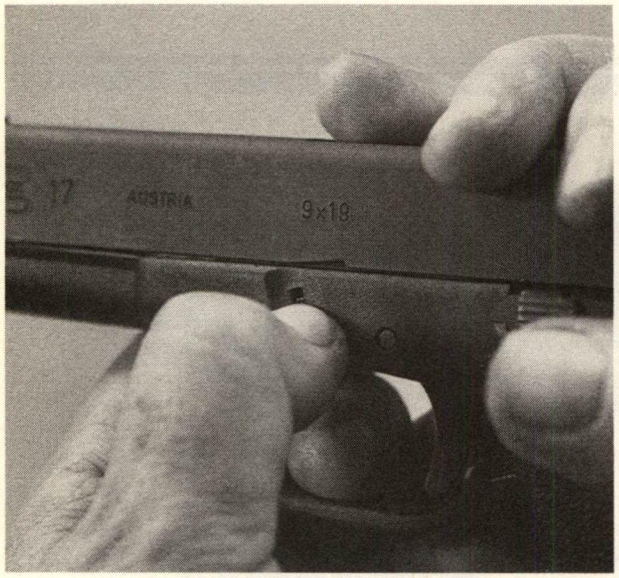
Glock 17L **Glock 19**

Data:	Glock 17
Origin:	Austria
Manufacturer:	Glock GmbH, Deutsch-Wagram
Cartridge:	9mm Luger
Magazine capacity:	17 rounds
Overall length:	$8^{1}/_{8}$ inches
Height:	$5^{5}/_{16}$ inches
Barrel length:	$4^{1}/_{2}$ inches
Weight:	23.13 ounces

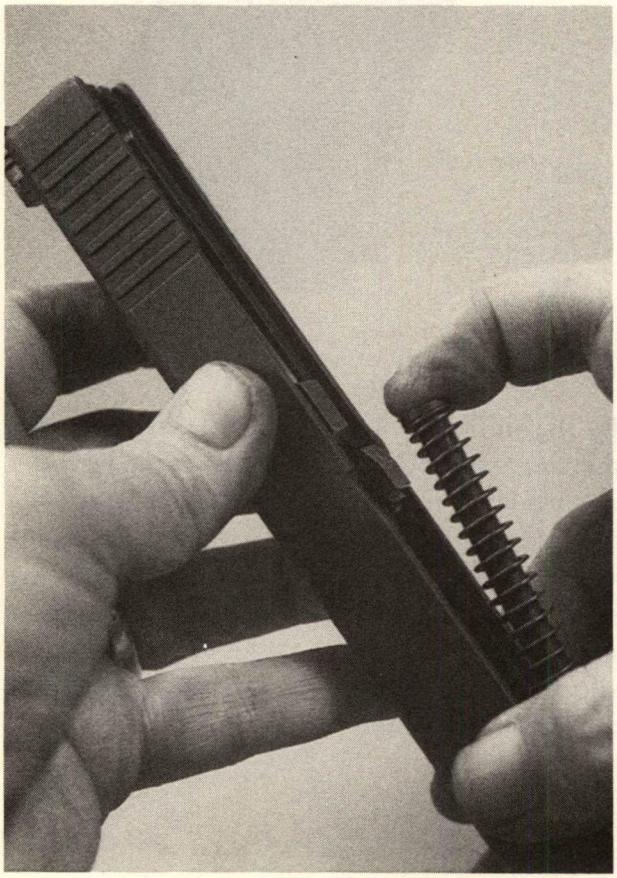
Adopted by the military forces of Austria in 1983 as a standard sidearm, the Glock is notable for having its entire lower frame made of modern thermoplastic, with steel inserts where needed. It was not the first gun to have this type of construction, but it was the first of its type to enjoy commercial success. It has an odd trigger system and other unique features. There is a also a target version, with an extended slide and barrel, and a compact version, the Glock 19. They are mechanically the same.

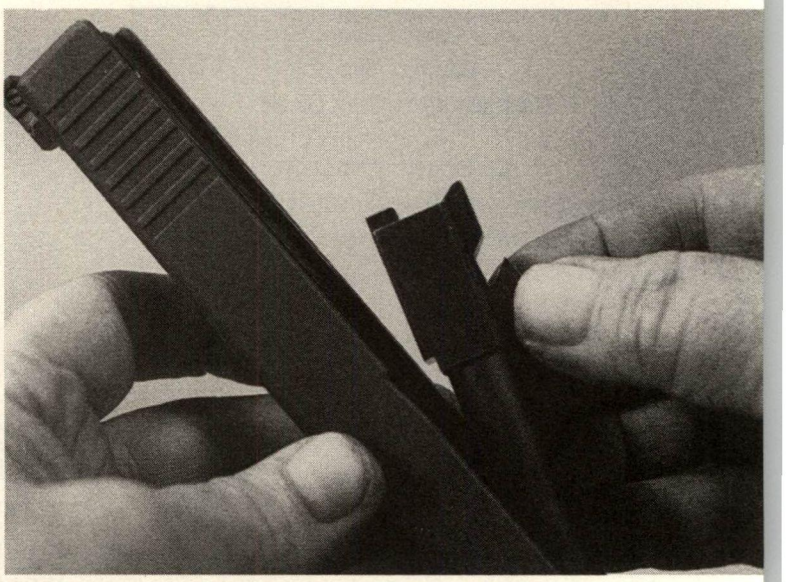
Field Strip:

1. With the magazine removed and the striker in fired position, retract the slide slightly and pull down on the serrated tabs of the takedown-latch, located on each side above the trigger opening. Don't pull the slide too far, or the trigger will engage the striker. The slide can't be removed with the gun cocked.



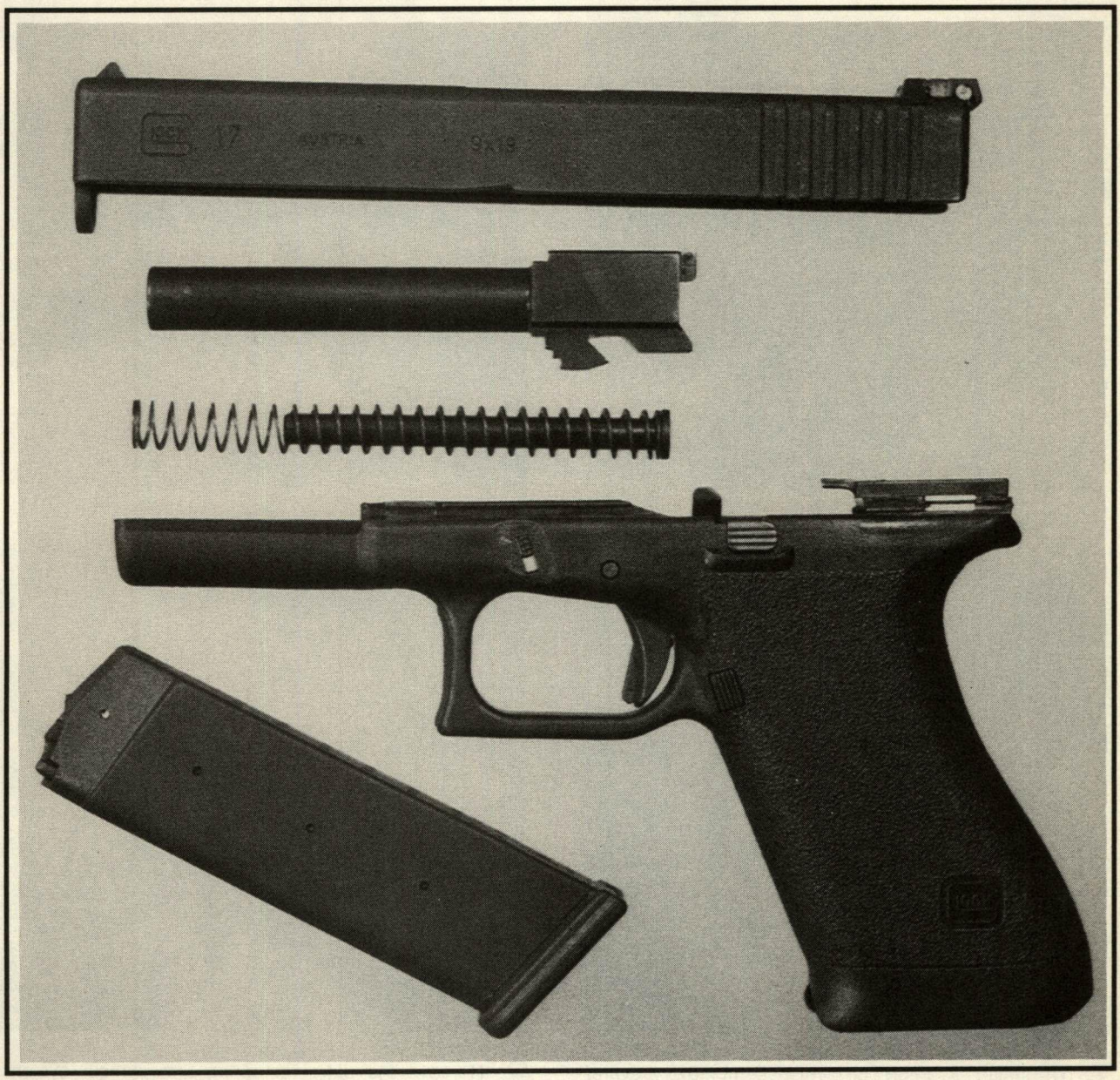
2. Move the slide and barrel assembly forward off the frame.





4. Move the barrel slightly forward, and remove it from the underside of the slide. **Gun is now field-stripped.**

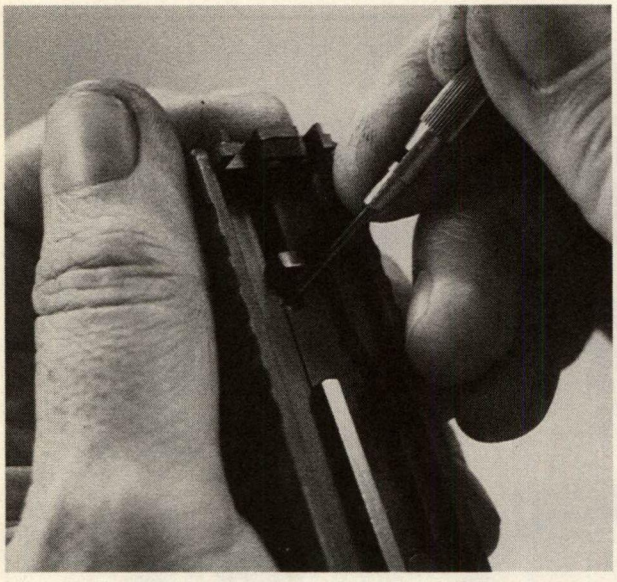
3. Disengage the recoil spring guide from the underlug of the barrel, and remove the guide and spring. **Caution:** *The spring is under tension, so control it.*



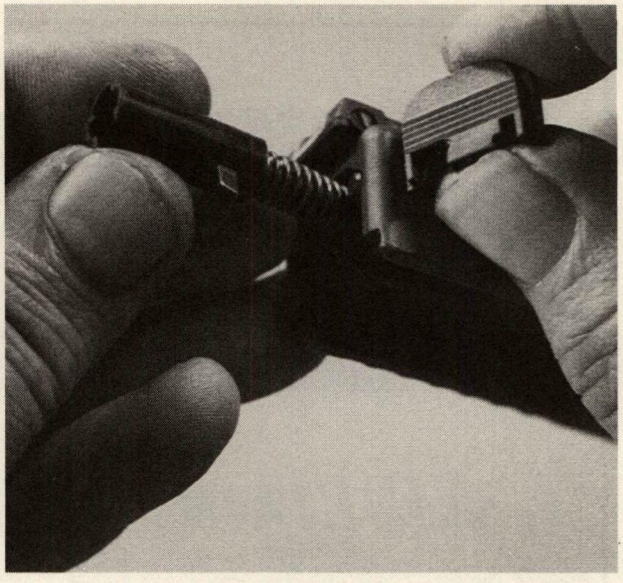
Glock 17 field-stripped

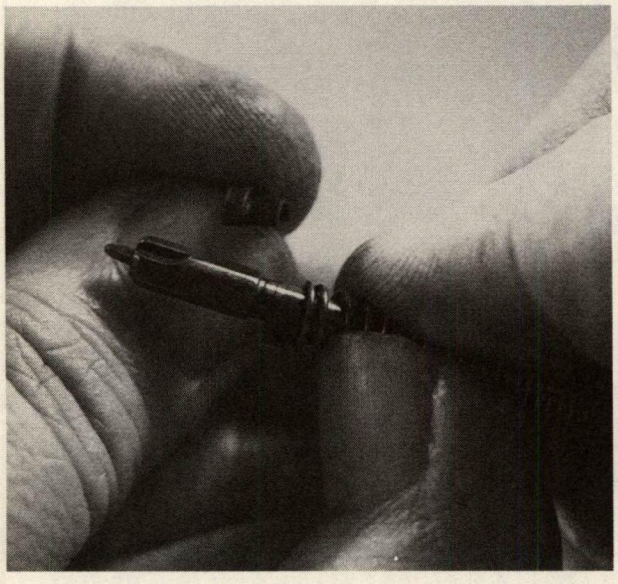
Detail Strip:

5. With a small tool, depress the striker sleeve toward the front, and move the slide endpiece downward. **Caution:** *The striker spring and ejector spring are under tension.*



6. Remove the striker and its sleeve and spring toward the rear.

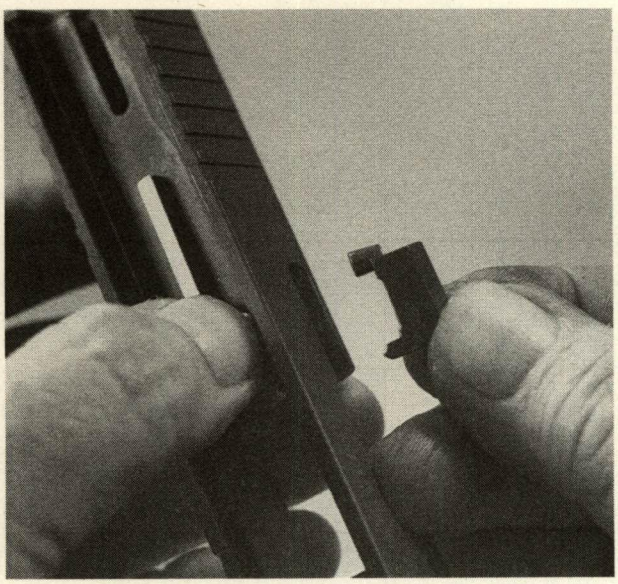




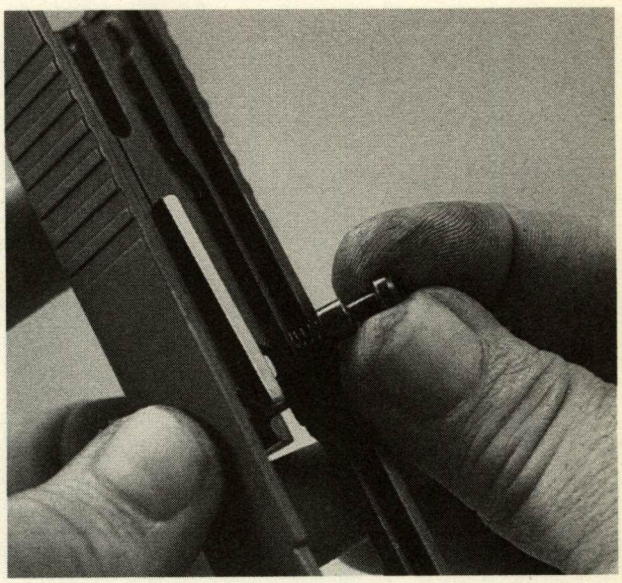
7. The striker assembly can be disassembled by drawing the spring back and separating the two halves of the small collar at the front.

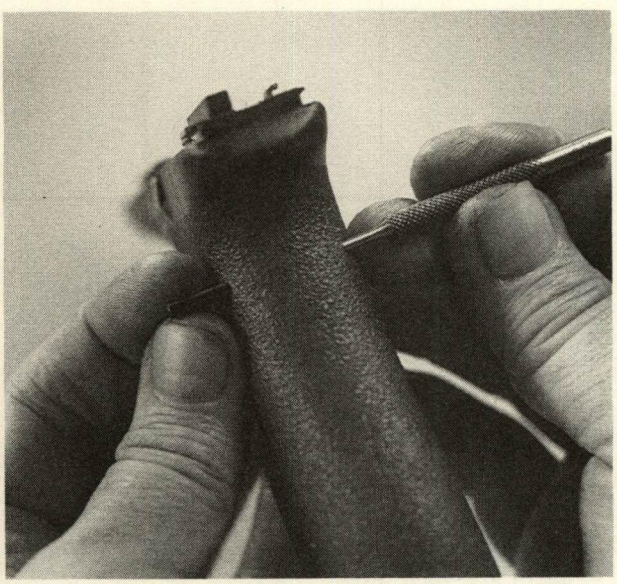
8. Remove the extractor spring and plunger system toward the rear.

9. Depress the firing pin lock on the underside of the slide, and remove the extractor toward the right.

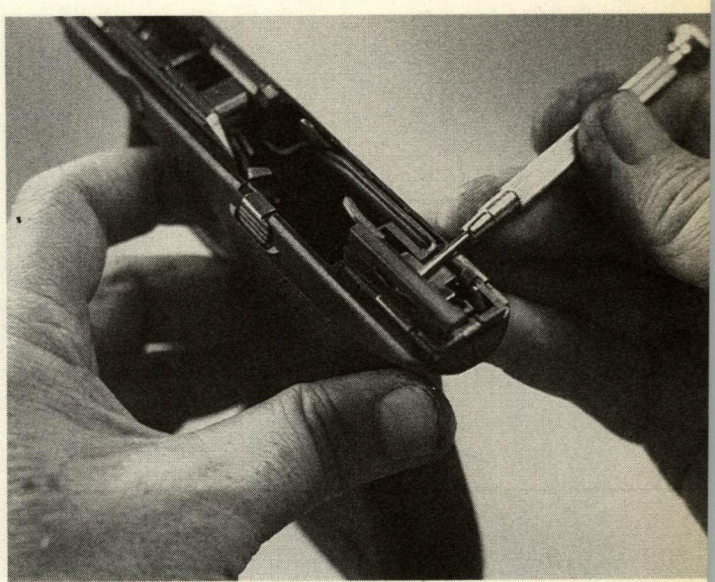


10. Remove the firing pin lock and its spring from the underside of the slide.



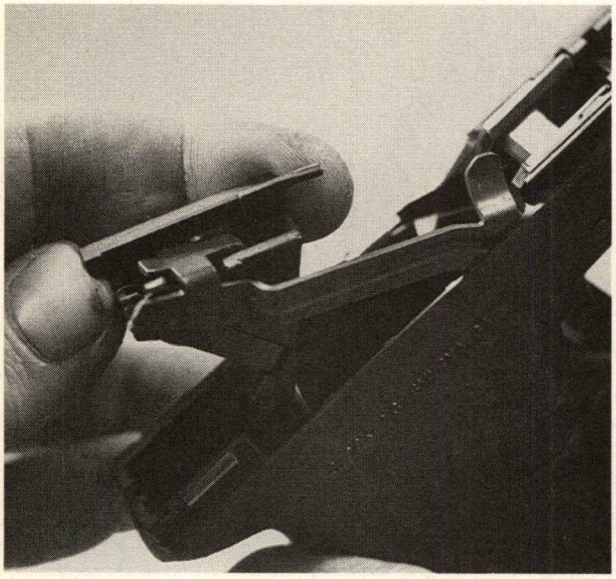


11. Push out the cross-pin at the rear of the grip frame.

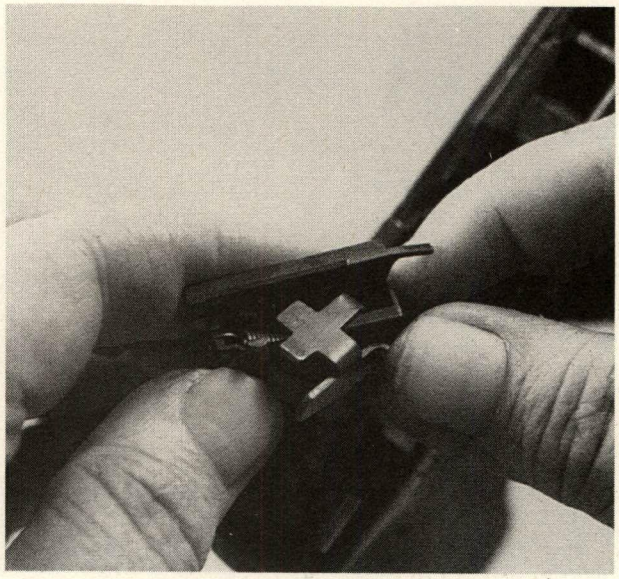


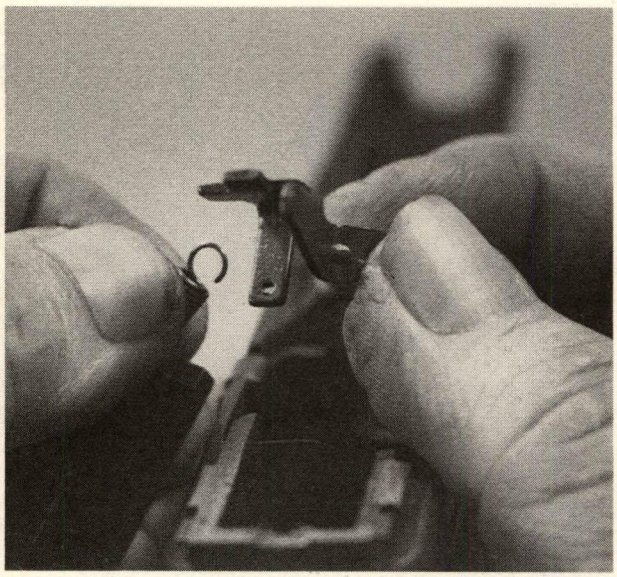
12. Use the right and then the left slide rail as bases to gently pry the sub-frame upward.

13. Move the sear unit upward out of the frame. Note that it is attached to the trigger bar.

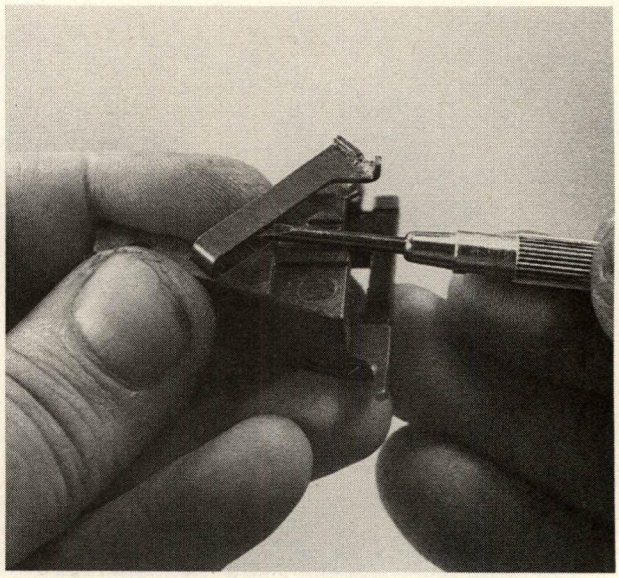


14. Move the sub-frame rearward and turn it toward the left to disengage the left tab of the trigger bar from its slot, as shown.



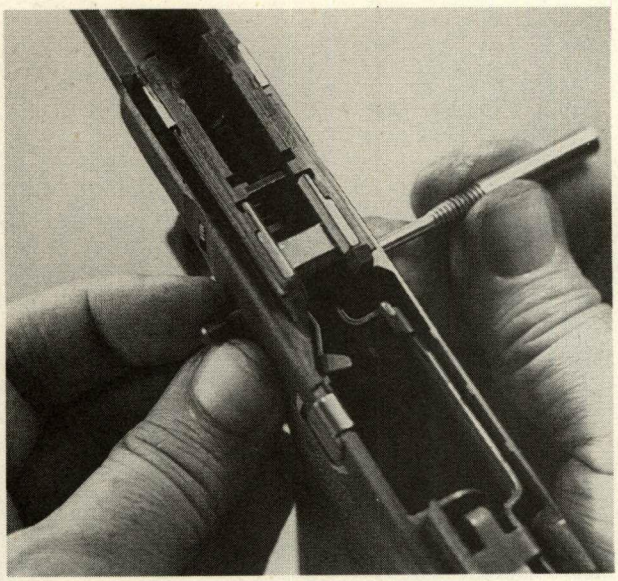


15. The trigger bar spring is easily unhooked from its hole in the underside of the bar.

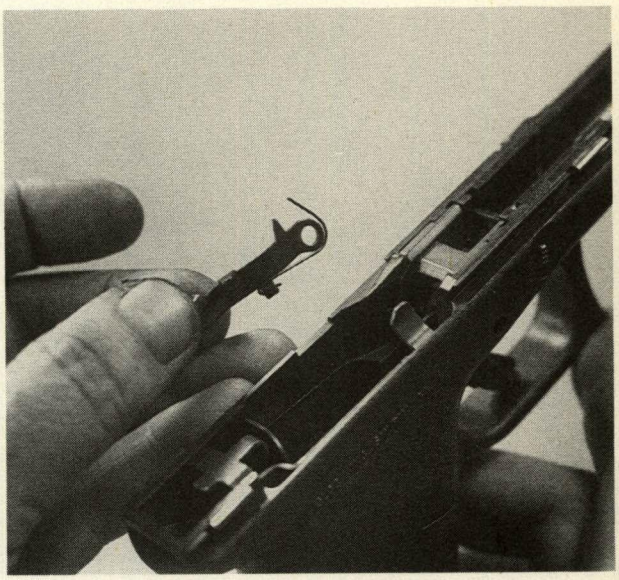


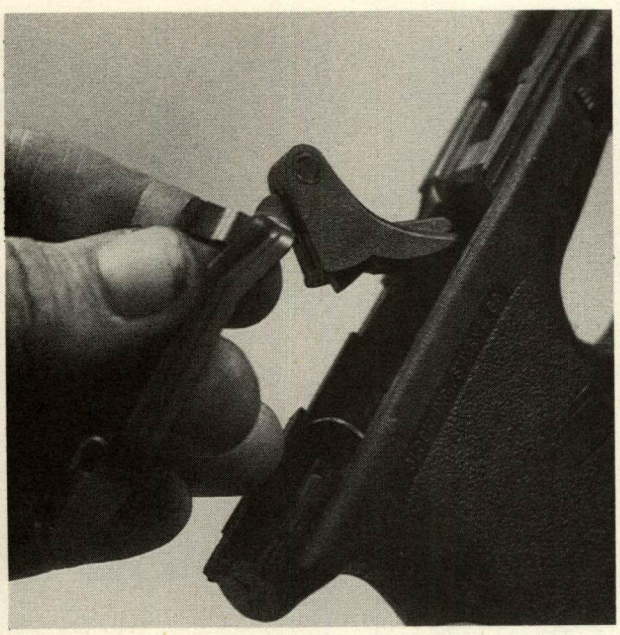
16. The disconnector is easily pried out of its recess in the sub-frame.

17. Drive out the trigger cross-pin toward either side.

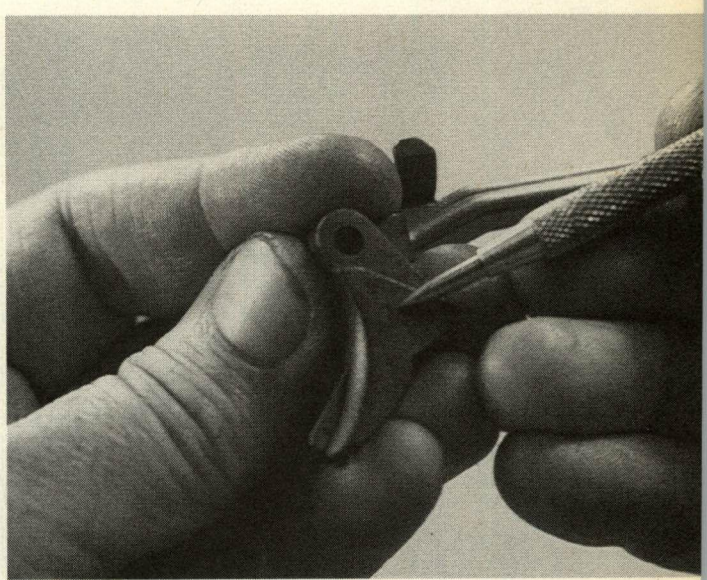


18. Remove the slide latch and its attached spring upward and toward the rear.





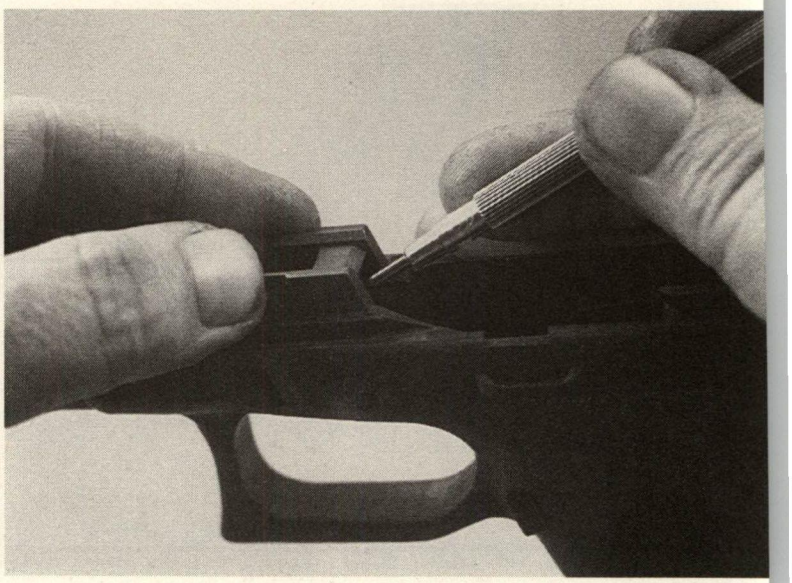
19. Move the trigger assembly toward the rear, and remove it upward.

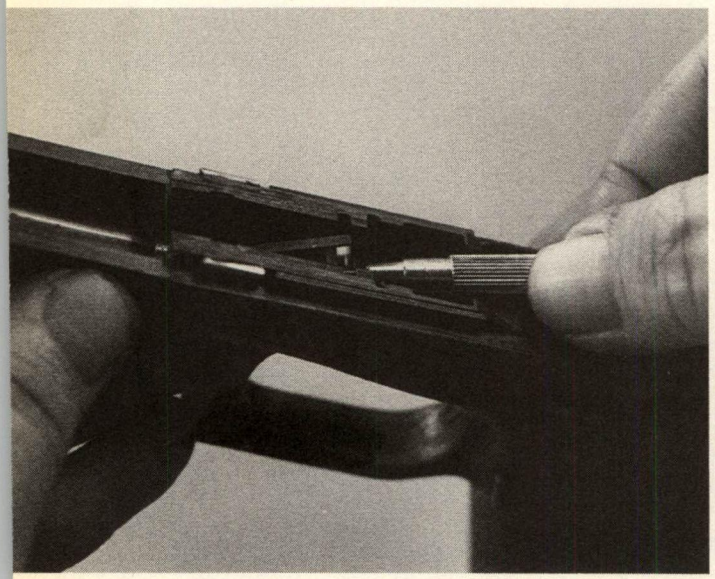


20. The trigger safety and the bar are both pivoted and retained in the trigger by blind pins. Routine disassembly is not possible.

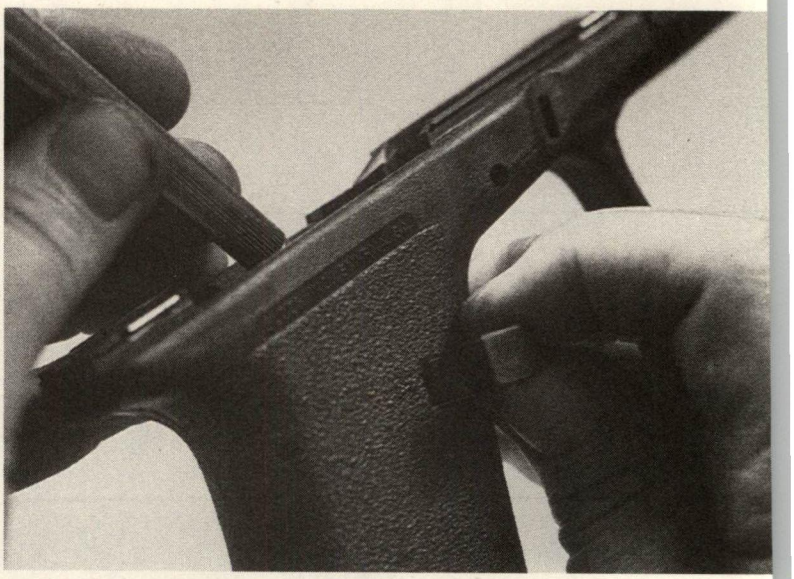
21. Insert a small tool to depress the blade spring that powers and retains the takedown-latch. The latch can then be taken out toward either side.

22. The barrel locking block can be pried gently upward and removed.





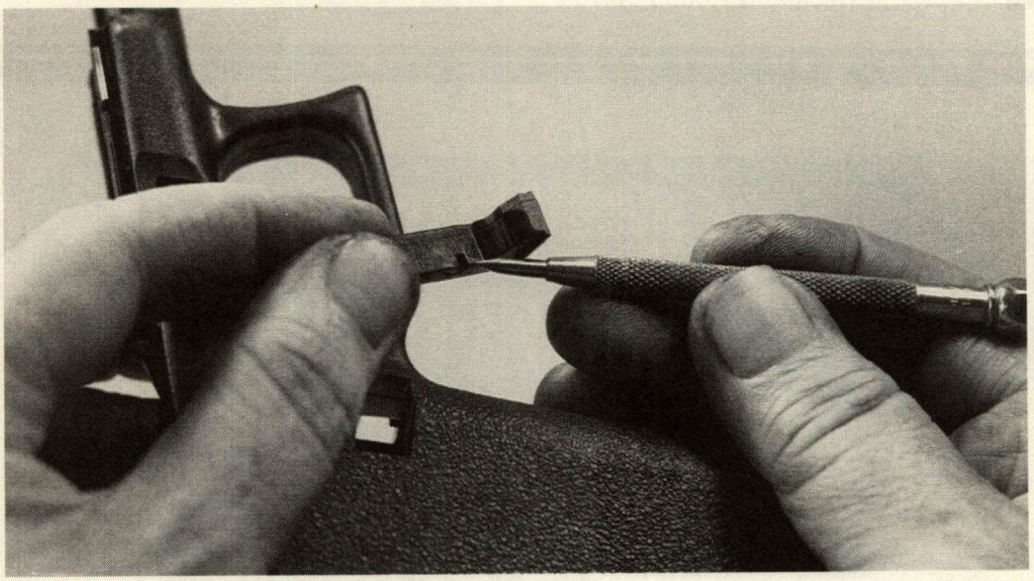
23. Inserting a slim tool at the bend in the takedown-latch spring will allow it to be pried upward and removed.

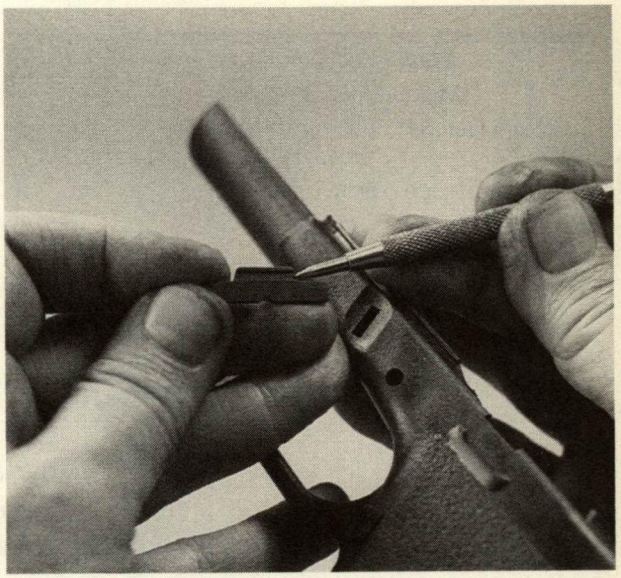


24. Insert a tool into the magazine well to tip the upper end of the magazine catch spring toward the right until it aligns with the exit cut in the lower edge of the catch, then move it rearward out of the cut and let it spring back toward the left. The magazine catch is then taken out toward the right. If necessary, the spring can be gripped and pulled out of its mounting hole upward.

Reassembly Tips:

1. When replacing the magazine catch, it is necessary to insert a tool to hold the tip of the spring out of the way as the catch is reinserted. Then, the tip of the spring must be moved back into the notch in the catch.





2. When replacing the takedown-latch, note that it has a groove in its upper projection. This groove must be oriented toward the rear.

H&K P7

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Heckler & Koch P7 also apply to the following guns.

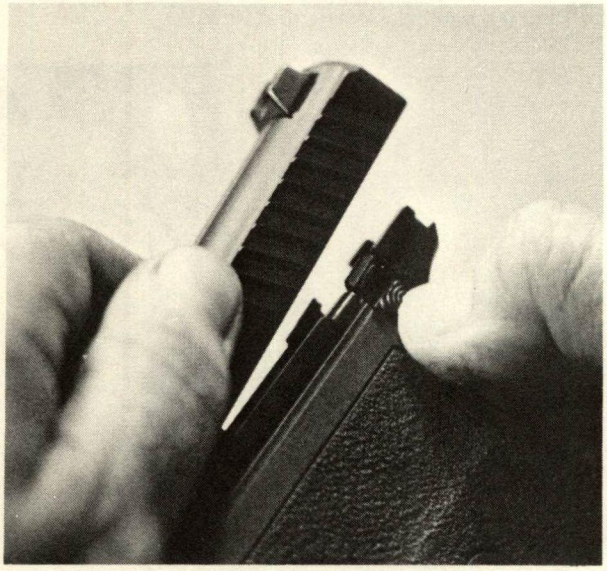
Heckler & Koch P7M8 **Heckler & Koch P7M13**

Data:	Heckler & Koch P7
Origin:	West Germany
Manufacturer:	Heckler & Koch GmbH Orberndorf/Neckar
Cartridge:	9mm Luger
Magazine capacity:	8 rounds
Overall length:	6.54 inches
Height:	5 inches
Barrel length:	4.13 inches
Weight:	30.5 ounces

One of the smallest pistols made for the 9mm Luger round, the P7 was originally called the "PSP," but received its numerical designation in the West German police trials. Notable for its gas-locked breech and squeeze-cocking operation, it is a fine choice for a back-up piece. Flat and concealable, it is never cocked until the squeeze-lever is fully depressed, and is instantly uncocked when the lever is released. Later versions, the P7M8 and P7M13, have a different magazine release. It is not complicated, and should cause no takedown difficulty. Otherwise, the same instructions will apply.

Field Strip

1. Remove the magazine, and depress the takedown button. Move the slide about $^1/_2$-inch toward the rear, and lift the rear of the slide upward.

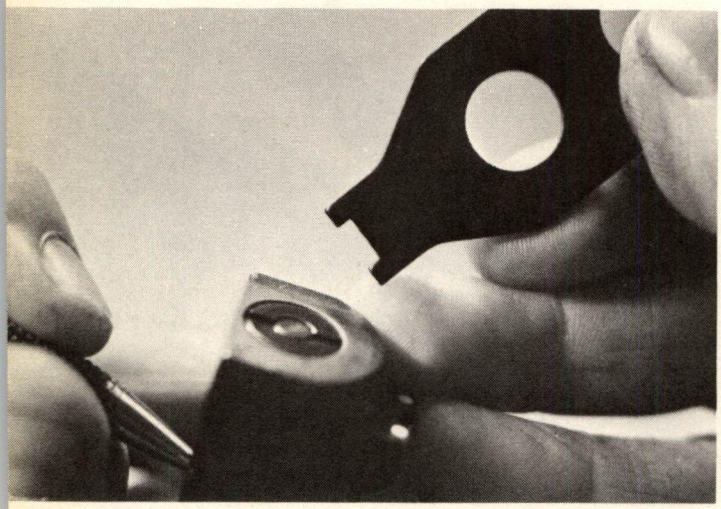


2. Remove the slide assembly toward the front. Remove the recoil spring from the barrel. **Gun is now field-stripped.**

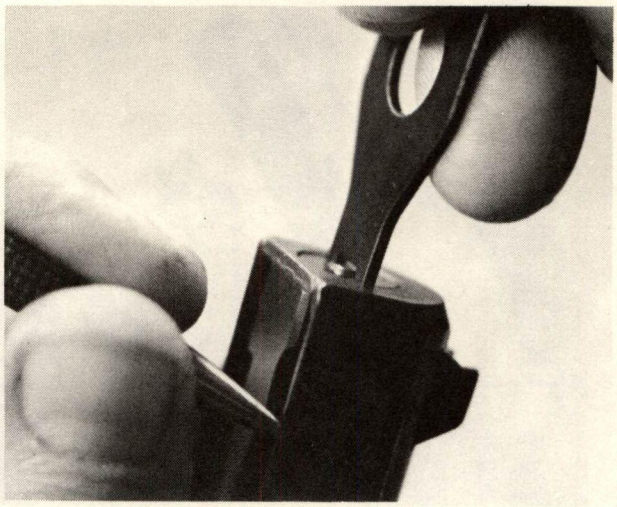
Heckler & Koch P7 field-stripped

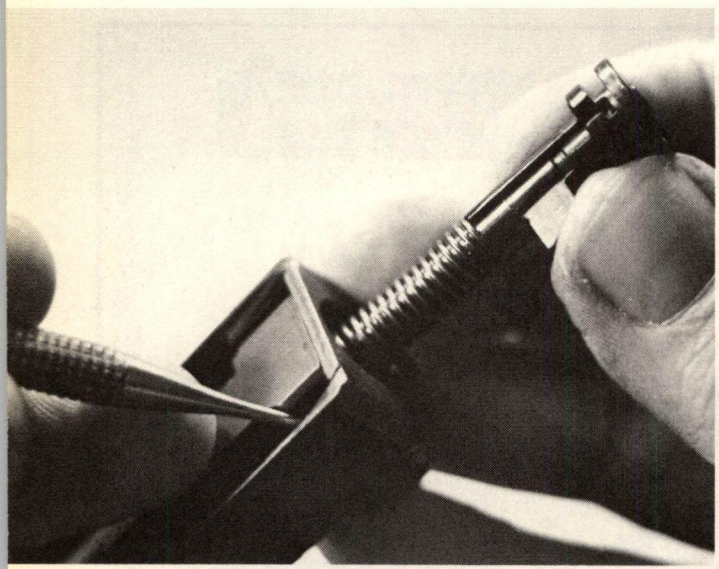
Detail Strip:

3. Removal of the firing pin assembly is easily done with the slide in place, before field-stripping, as the squeeze-cocking lever can be used to move the firing pin (striker). With the slide removed, it is necessary to insert a tool to engage the firing pin lug, moving the pin back until its head is even with the rear of the slide. Holding it in this position, use the tool supplied with the gun to engage the slots in the retainer.

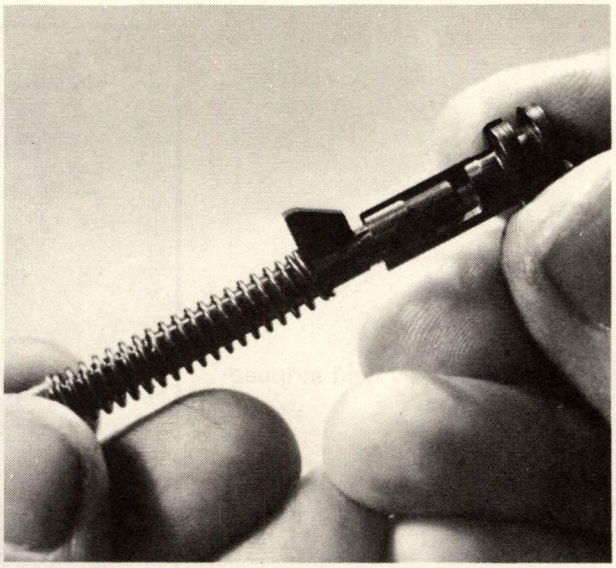


4. Depress the firing pin retainer and turn it 90 degrees to the right (clockwise, rear view).



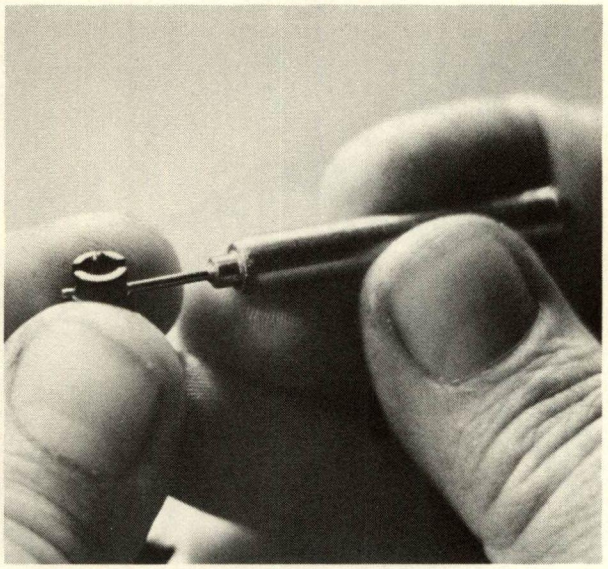


5. Remove the firing pin assembly toward the rear.

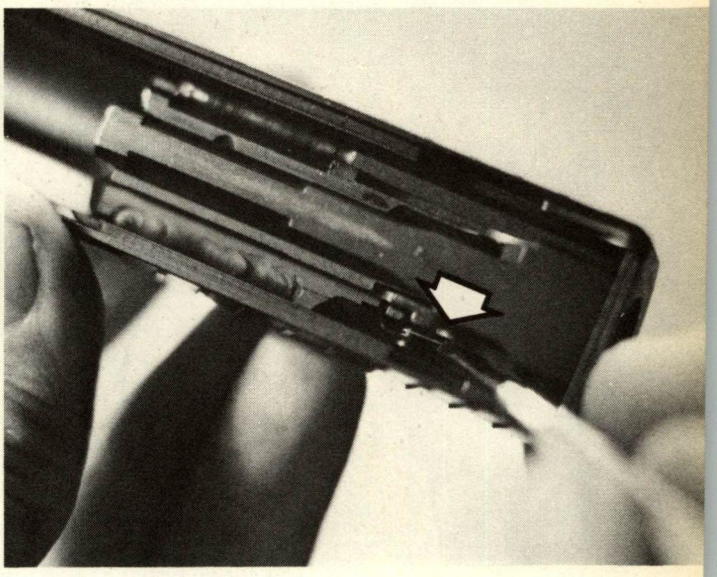


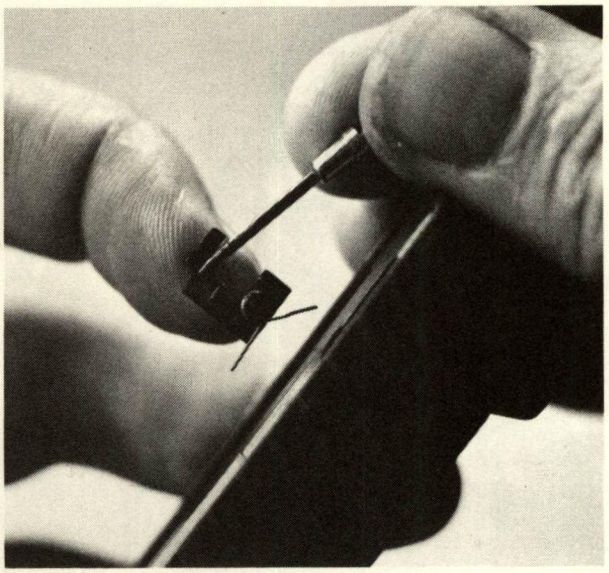
6. Grip the front spring collar and turn the firing pin lug out of its recess in the retainer, then remove the retainer toward the rear.

7. Restrain the spring collar, and push out the small cross-pin at the front of the firing pin. **Caution:** *The spring is under tension, so control it.* Take care that the tiny pin is not lost, and remove the collar and spring from the front of the firing pin.

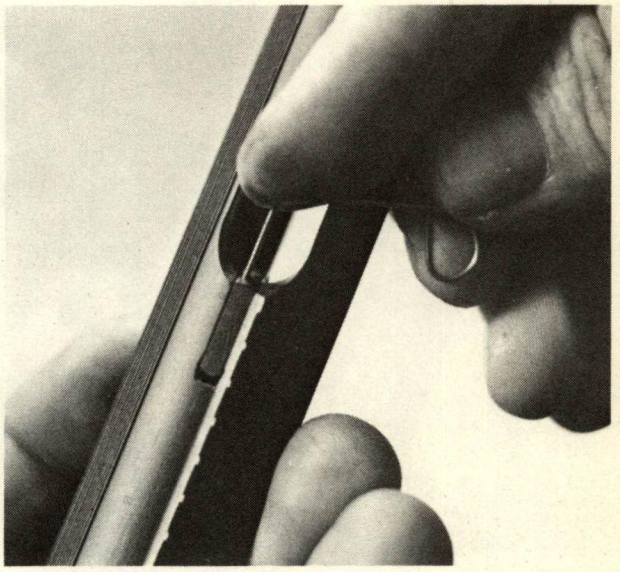


8. Insert a small screwdriver into the underside of the slide at the right rear, and trip the rear arm of the firing pin block spring from its shelf (arrow) toward the right.



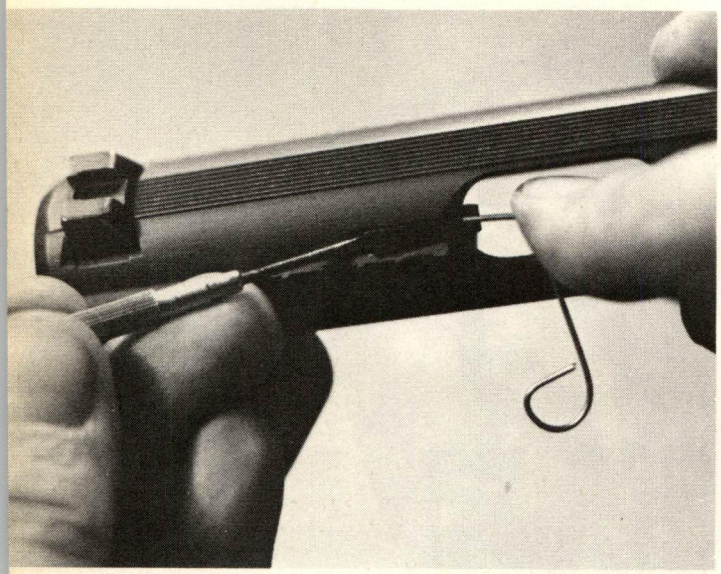


9. Remove the firing pin block and its spring from the bottom of the slide. This is a captive spring, so there is no danger of loss.

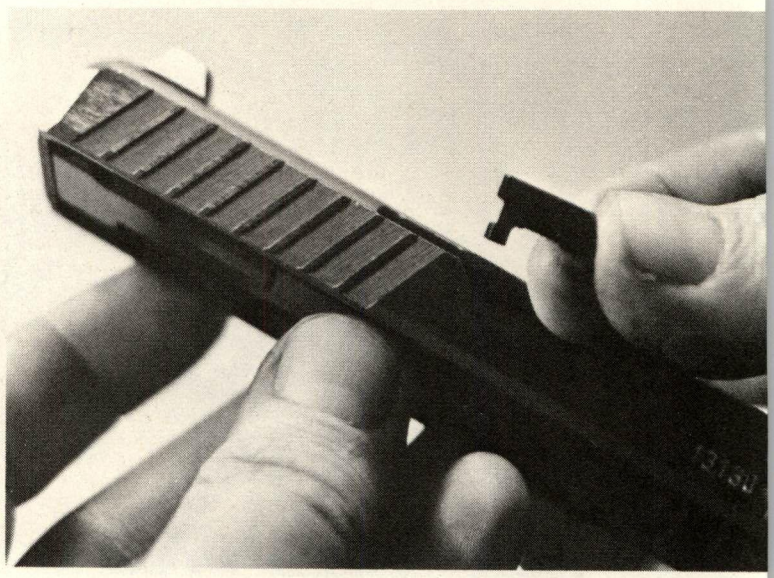


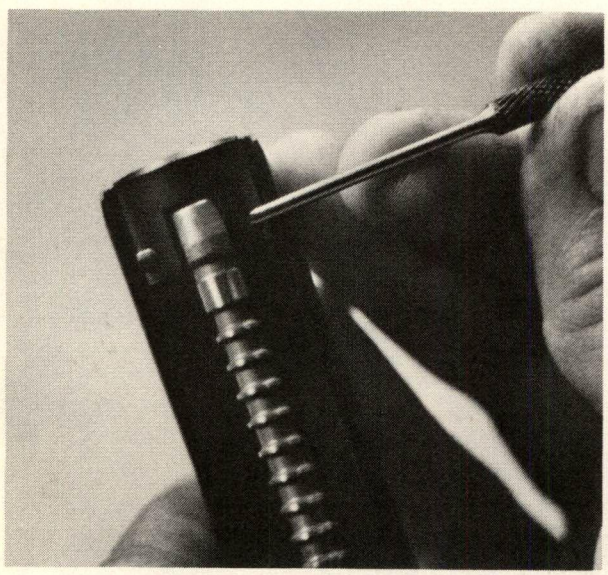
10. Removal of the extractor requires a tool made of spring wire, about .040-inch diameter. Insert the tool at the front of the extractor, in the groove provided, and compress the extractor plunger and spring toward the rear.

11. As the plunger is depressed, the rear of the extractor will move slightly outward. Keeping pressure on the plunger, use a small screwdriver at the rear to tip the extractor out of its recess. **Caution:** *The plunger and spring will be released as the extractor clears, so control them.*

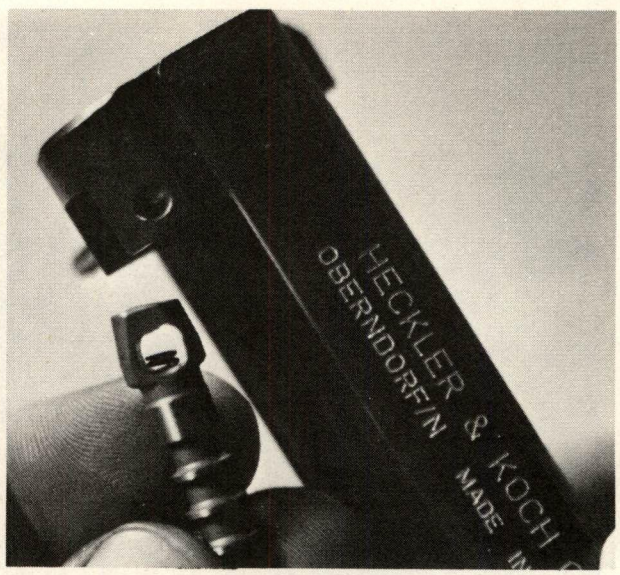


12. Remove the extractor, and take out the plunger and spring.





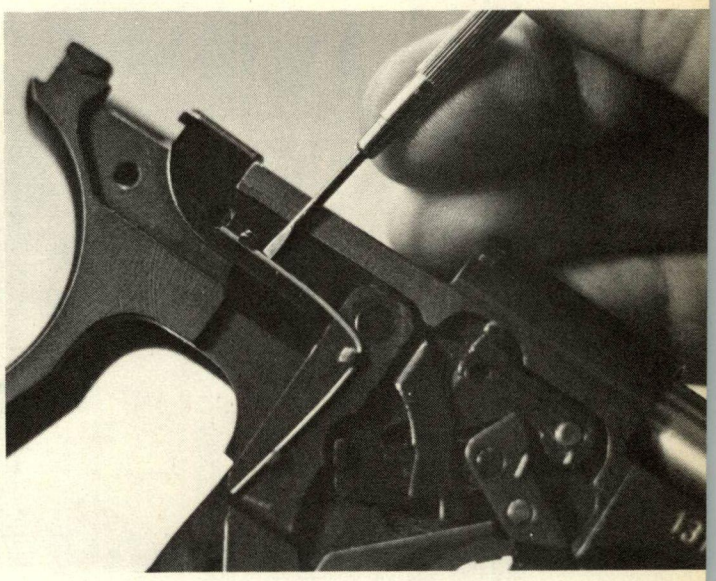
13. Drift out the roll cross-pin at the lower front of the slide.

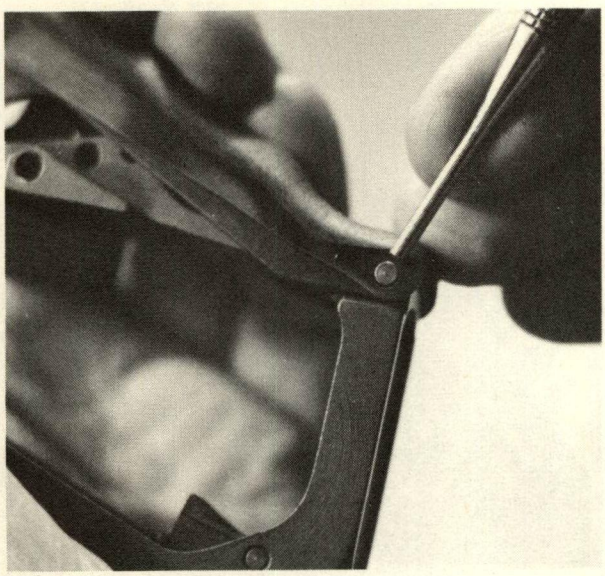


14. Remove the gas piston from the slide, and take out the compression spring mounted inside it at the front.

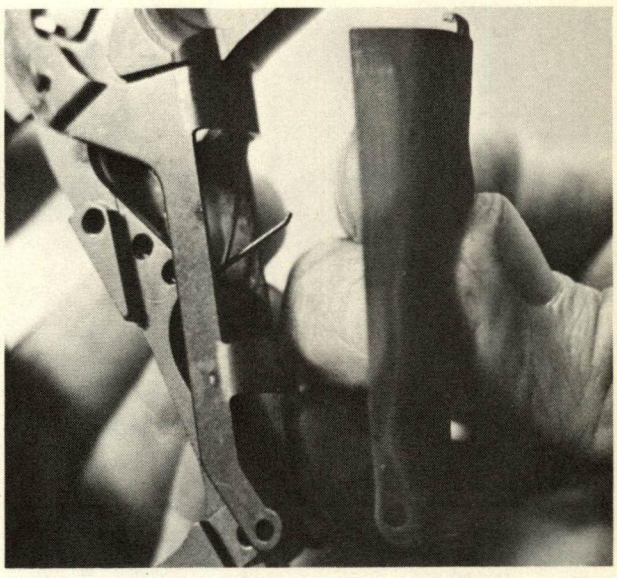
15. The reverse end of the firing pin tool is a screwdriver blade that fits the grip screws. After the screws are removed, lift each grip at the front, move it slightly forward, then lift it off.

16. At the upper rear or lower front, detach one arm of the cocking-lever spring from its hook, and remove the spring.



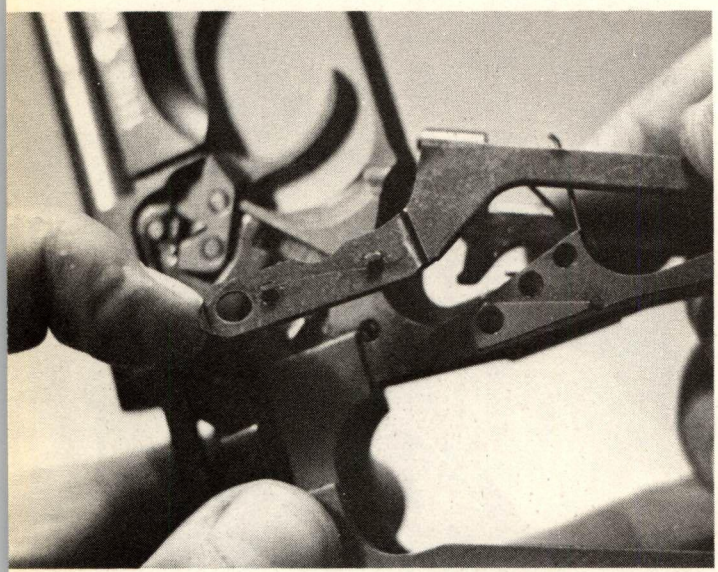


17. Restrain the squeeze-cocking piece, and push out the pivot pin at the lower front of the grip frame toward either side.

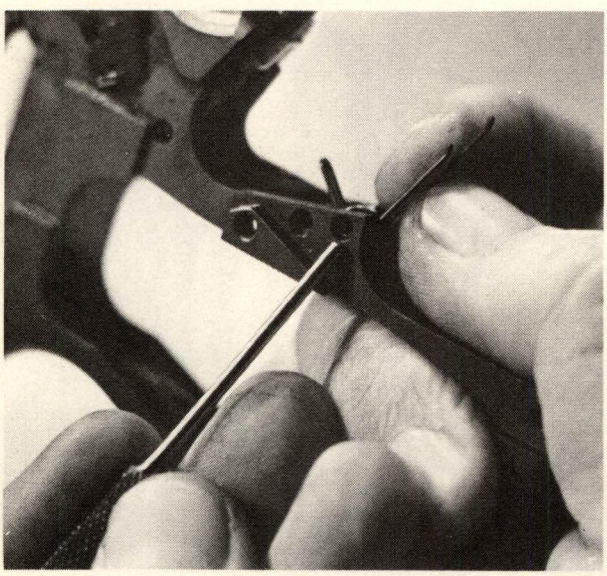


18. Remove the squeeze-cocking piece toward the front.

19. Move the lower arms of the drag lever forward until they clear the frame, then turn the drag lever toward the left side, and remove it downward and toward the left.



20. The cocking-lever can now be removed from its recess on the right side.

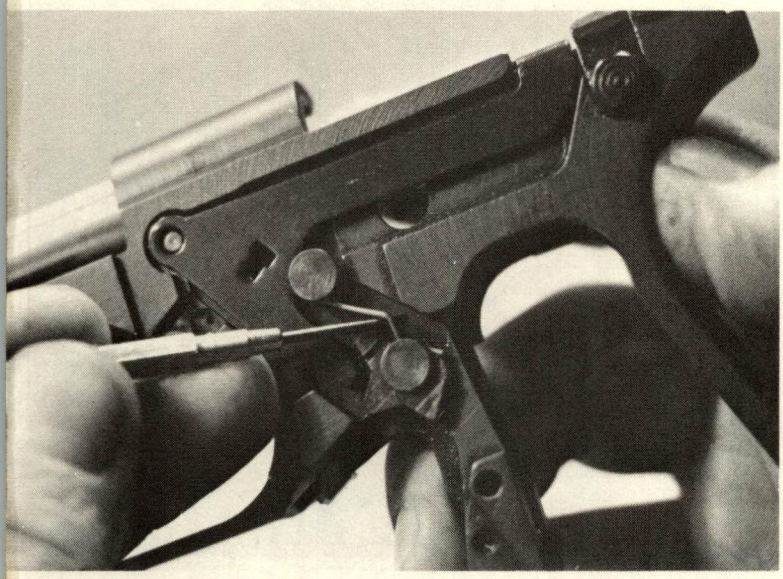


21. If necessary, the spring which powers both the squeeze-cocking piece and the drag lever can be removed by drifting out its roll cross-pin at the front of the grip frame.

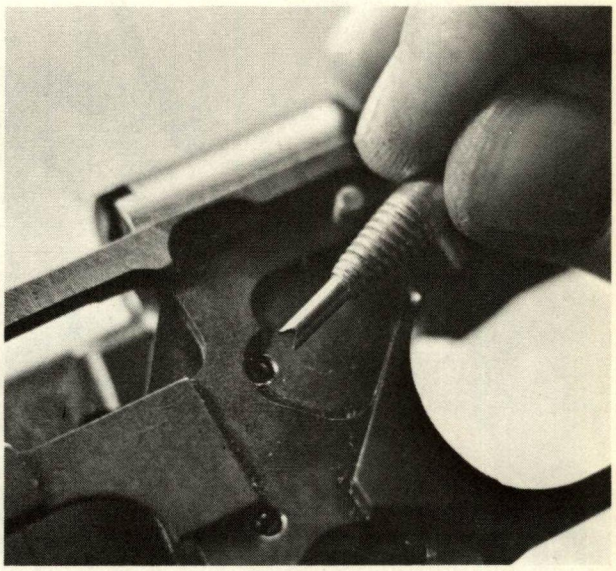
22. Push the trigger cross-pin slightly toward the left, and the combination trigger and trigger bar spring will be released upward within its recess. Remove the spring upward and toward the right.

23. Push the trigger pin out, move the trigger forward, and turn it around toward the left for removal. The trigger bar is easily separated from the trigger.

24. Remove the disconnector toward the right.



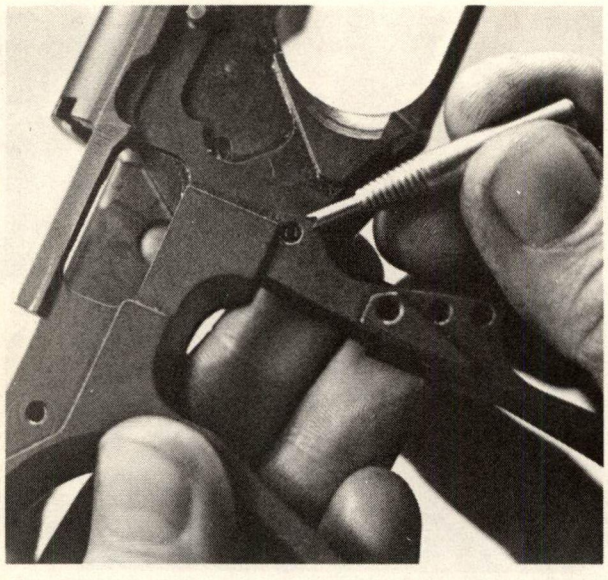
25. Detach the rear arm of the ejector/slide latch spring from its shelf on the rocker, and allow it to swing forward, relieving its tension. **Caution:** *Keep fingertips clear of the spring as it is released.*

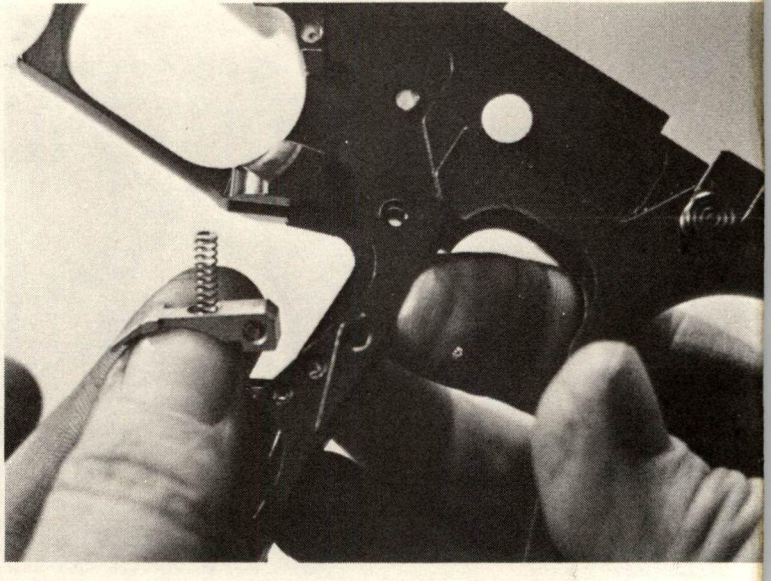


26. The two cross-pins having a wide flat head on the left are split and tempered on the right, locking them in place. Removal will require a shop-made tool of the same diameter, with a V-cut at its end to compress the end-leaves of the pin. Using a regular drift punch on these pins can break them. With the special tool, start the ejector/slide latch spring pin toward the left.

27. Move the ejector/slide latch off its post at the front, move it toward the rear, and remove it.

28. Drift the spring post out toward the left, and remove the spring.

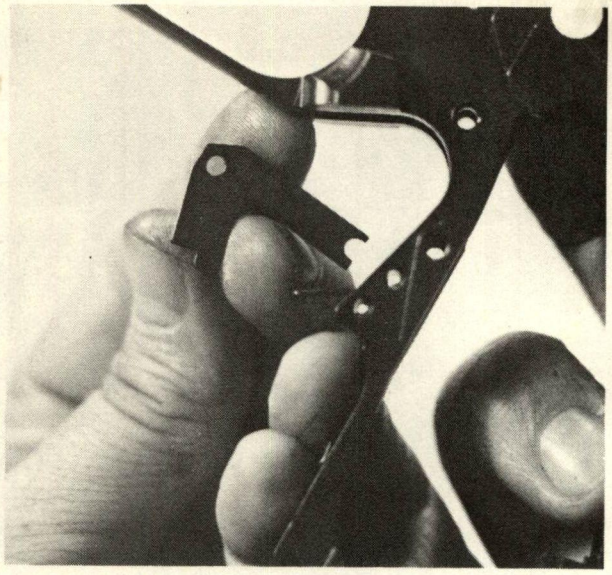




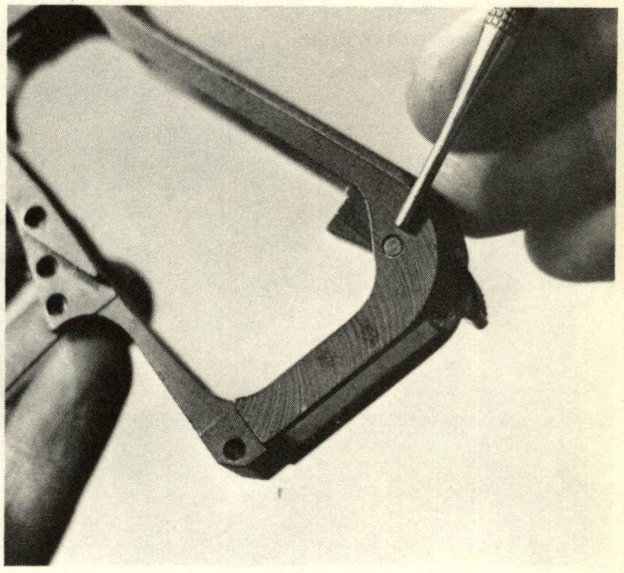
29. Drift out the rocker pivot pin, again using the special tool. During removal of this pin, restrain the cocking latch, located on the underside at the rear of the trigger guard, as it will also be released. Remove the rocker from its pin.

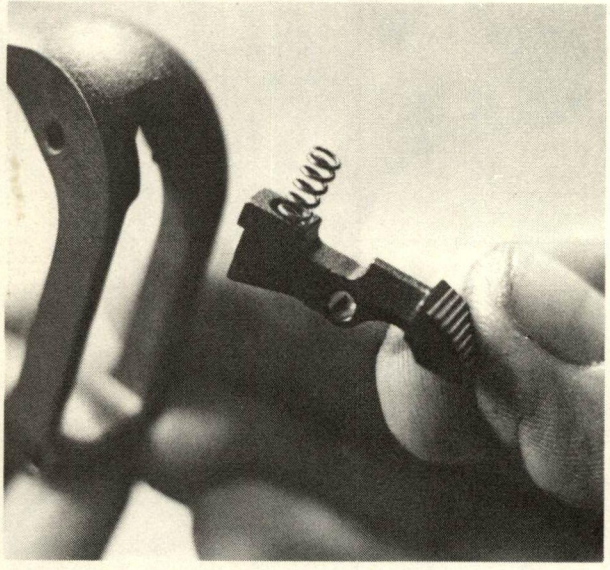
30. Remove the cocking latch and its spring downward.

31. Tip the cocking-lever stop over forward, and remove it toward the front. Note that the lower roll pin on which the stop rests retains no part, and need not be removed.

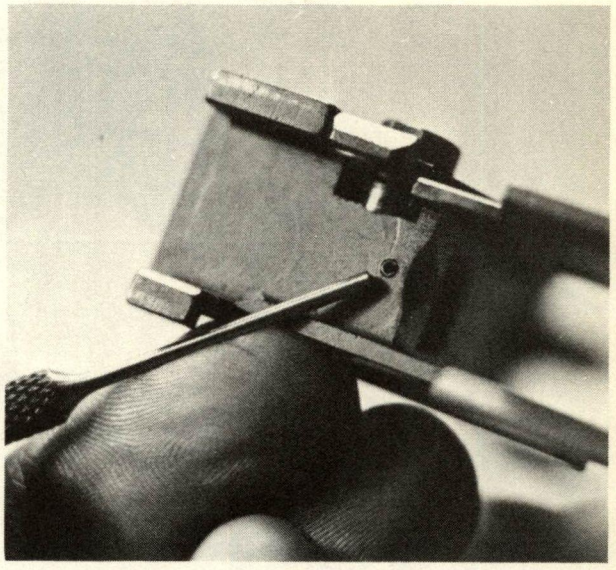


32. Push out the magazine catch cross-pin.





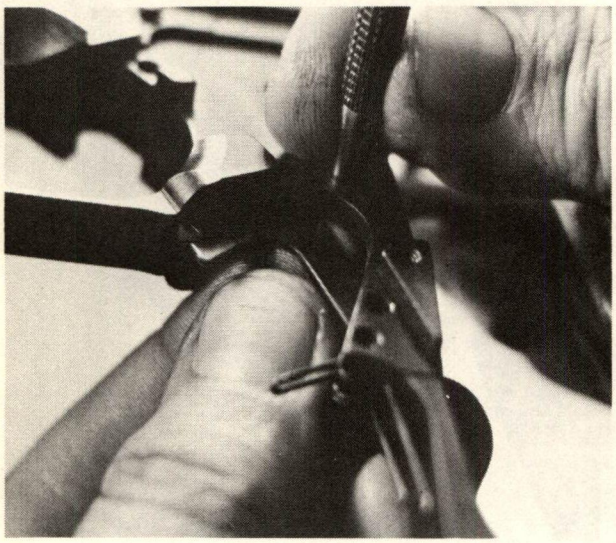
33. Remove the magazine catch and its spring downward.



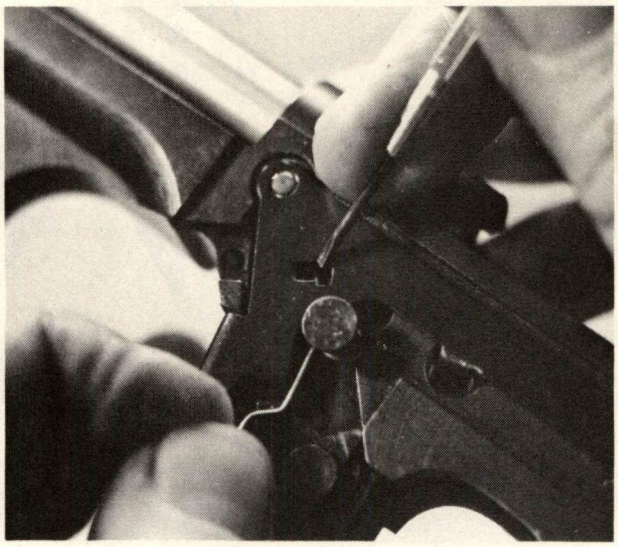
34. The takedown-latch button and its spring are retained by a vertical roll pin at the top of the frame, and this pin is drifted out downward. The latch and its spring are removed toward the left. The cross-pin which pivots the ejector/slide latch and the disconnector also internally retains the barrel and gas cylinder. Removal of these parts is definitely not recommended.

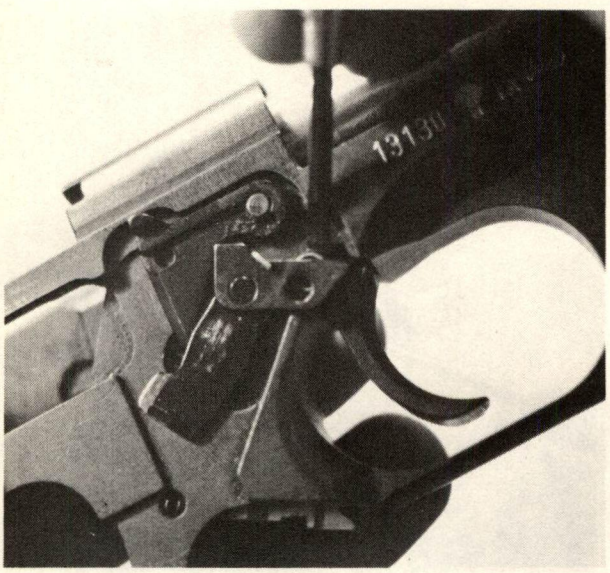
Reassembly Tips:

1. When replacing the cocking latch and the lever stop, set the latch in place, taking care that its spring is seated in its well in the frame. Insert a drift through the hole to temporarily hold it in place. Engage the lower tip of the stop with the roll pin, and swing the stop over toward the rear, depressing the latch to clear its step. Insert the cross-pin, and withdraw the drift.

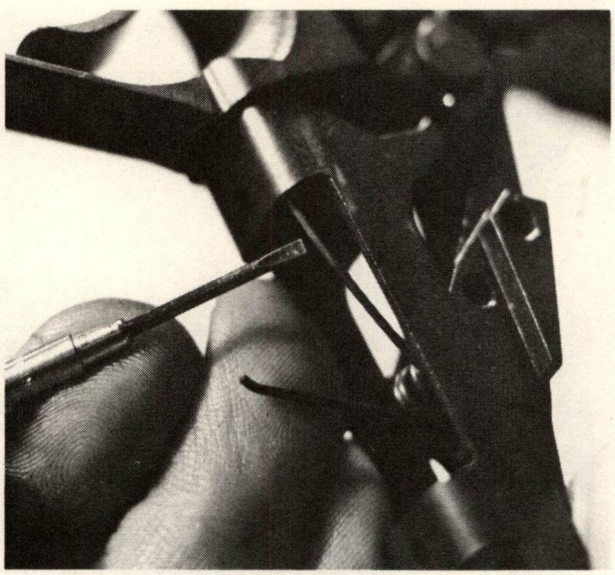


2. When replacing the ejector/slide latch, be sure the upper arm of the spring engages its hook on the inside of the latch.





3. When replacing the trigger system, set the trigger and attached trigger bar in place, and push the cross-pin toward the left until its end is even with the frame. Insert the spring, and use a tool to push it downward and toward the rear until it aligns with the pin, then push the pin into place.

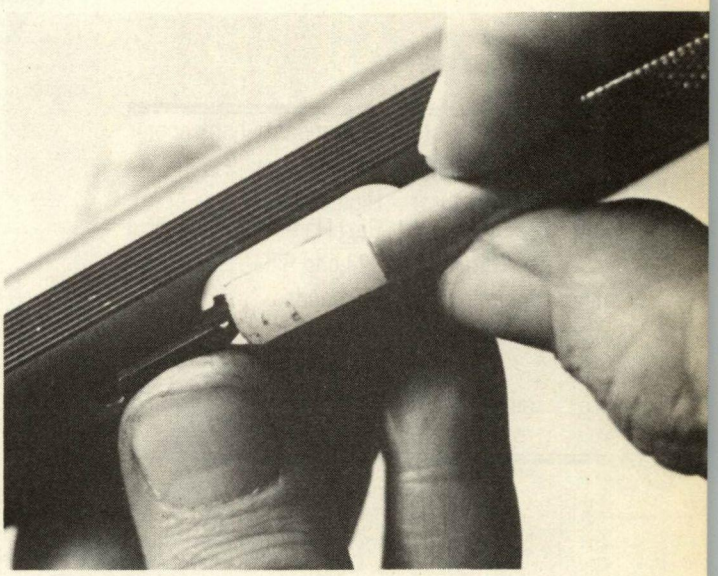


4. When replacing the drag lever and the squeeze-cocking piece, remember that the longer of the two spring arms powers the drag lever, and the shorter one powers the squeeze-cocking piece. During replacement of these parts, the cocking latch must be depressed upward. The pivot pin is more easily inserted with the levers in squeezed position.

5. This photo shows the right side of the gun, with the parts in proper position.

6. This photo shows the left side of the gun, with the parts in proper position.

7. When replacing the piston, note that the cross-opening in its forward end is irregularly shaped. The piston must be installed as shown. During reseating of the roll pin, insert a drift to prevent deformation of the compression spring.



8. When replacing the extractor, use a nylon drift punch to push the extractor toward the rear, while restraining and guiding the extractor with the thumb.

When replacing the firing pin assembly, simply insert it into the rear of the slide, and turn the retainer until its slot is in vertical position.

Hi-Standard Sharpshooter

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the High Standard Sharpshooter also apply to the following guns.

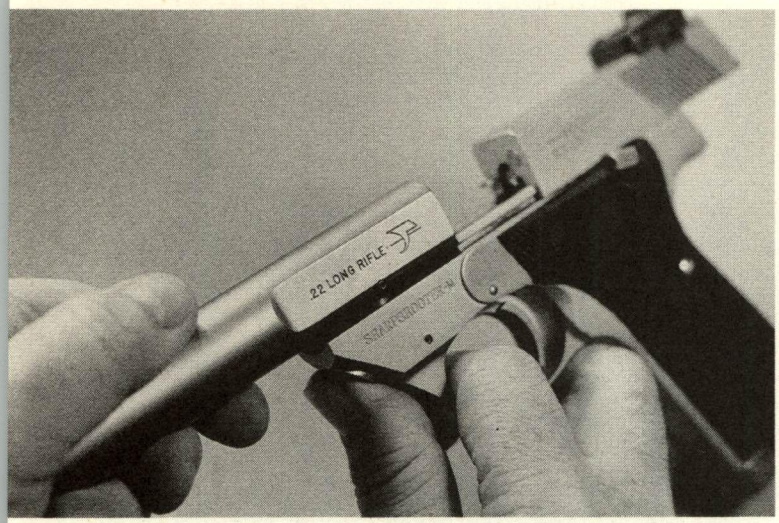
Hi-Standard Supermatic
Hi-Standard Supermatic Tournament
Hi-Standard Supermatic Citation
Hi-Standard Supermatic Standard Citation
Hi-Standard Supermatic Citation Military
Hi-Standard Supermatic Trophy
Hi-Standard Supermatic Trophy Military
Hi-Standard Victor
Hi-Standard Olympic ISU

Data:	Hi-Standard Sharpshooter
Origin:	United States
Manufacturer:	High Standard, East Hartford, Connecticut
Cartridge:	22 Long Rifle
Magazine capacity:	10 rounds
Overall length:	9 1/2 inches
Height:	5 5/8 inches
Barrel length:	5 1/2 inches
Weight:	45 ounces

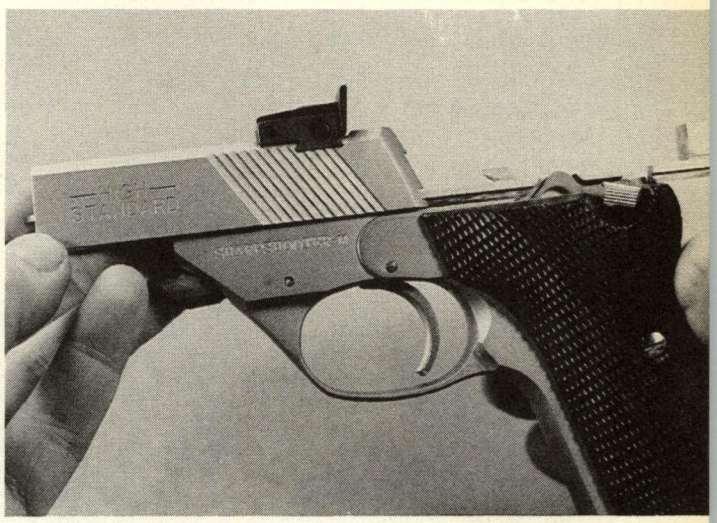
In the years between 1932 and the closing of the factory in 1984, the High Standard company made a lot of good 22-caliber automatic pistols. Many of the older ones have now disappeared into collections, but the later guns, from the Supermatic series on, are still very much in use. The Sharpshooter shown here has the same basic mechanism as the Victor, the Supermatics, and the Olympic ISU model. The instructions will apply for all of these.

Field Strip:

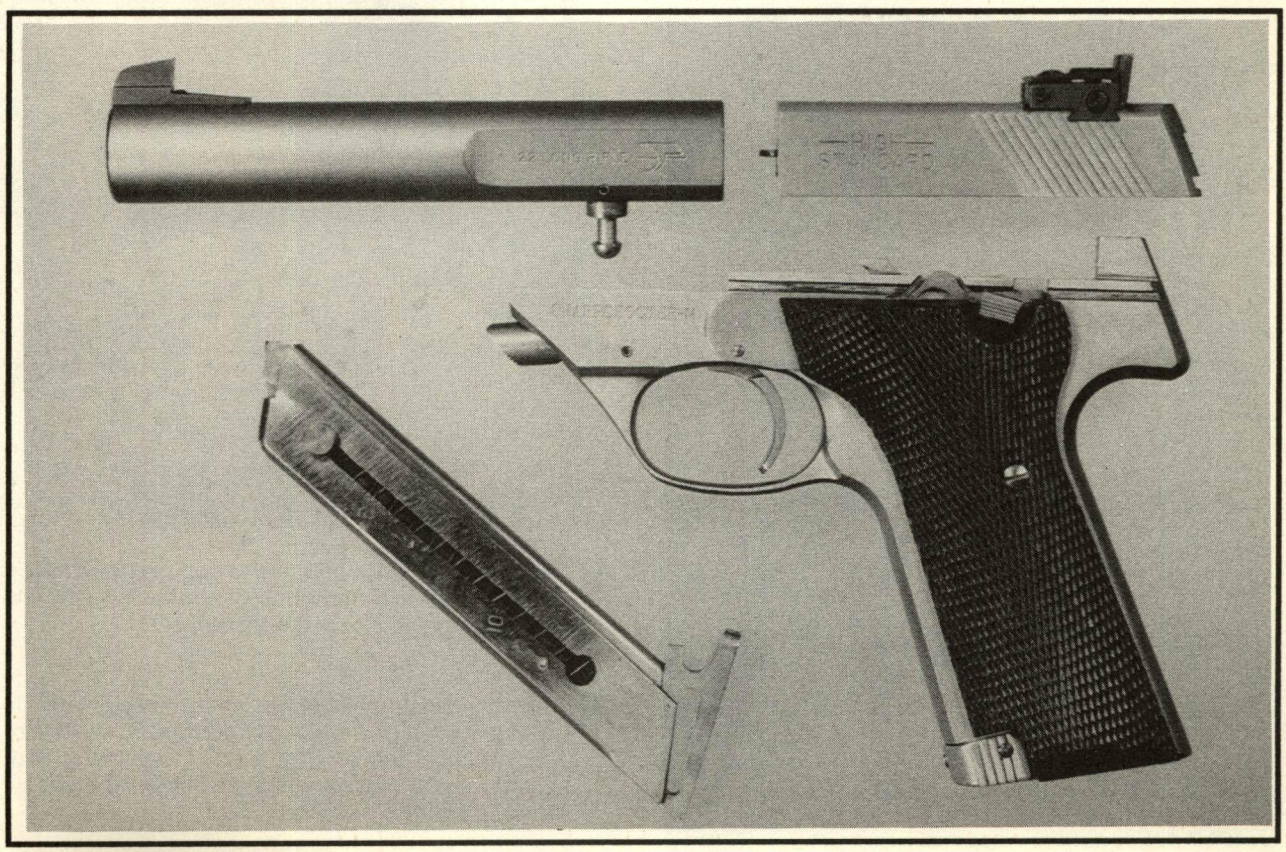
1. With the magazine removed and the internal hammer cocked, lock the slide open with the slide-latch. Fully depress the large button at the front of the frame, and lift the barrel off upward. **Note:** It may be necessary to tap the button lightly with a nylon hammer to free it for depression.



2. Restrain the slide, release the latch, and remove the slide from the frame toward the front. **Gun is now field-stripped.**

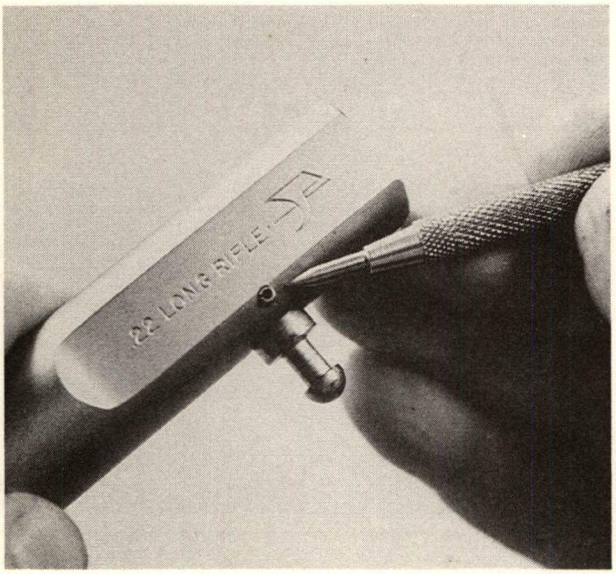


High Standard Sharpshooter field-stripped

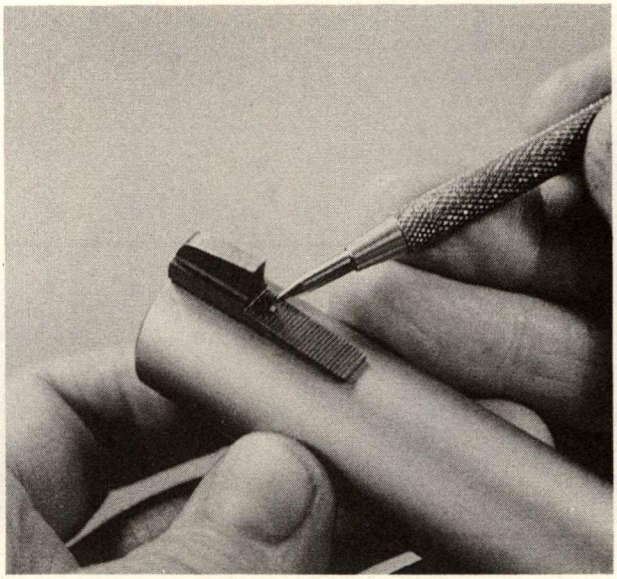


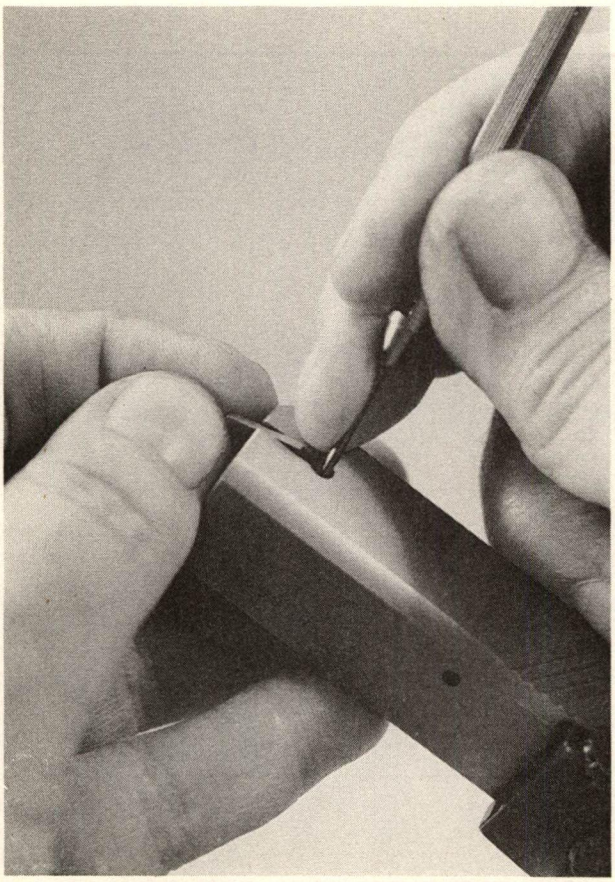
Detail Strip:

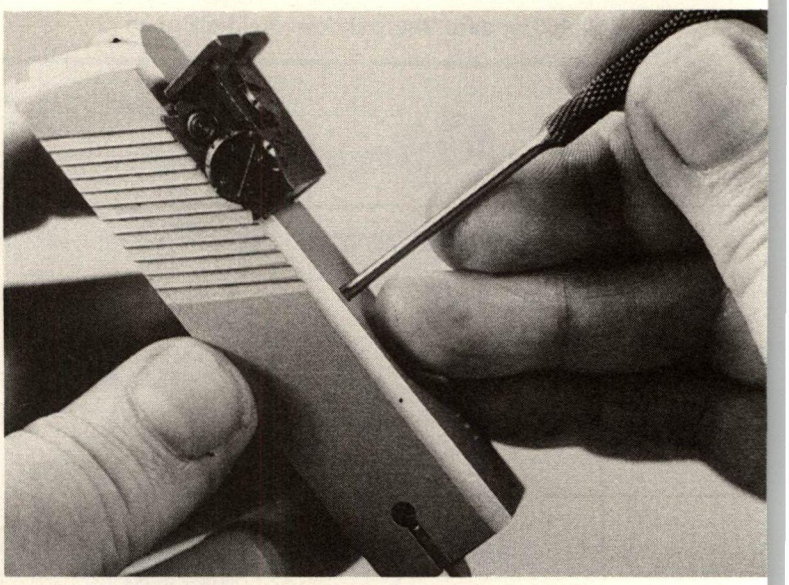
3. The barrel post is retained by a roll cross-pin. In normal takedown, the post is not removed.



4. The front sight is retained on the barrel by an Allen screw. If removal is not necessary for repair or refinishing, the sight is best left in place.



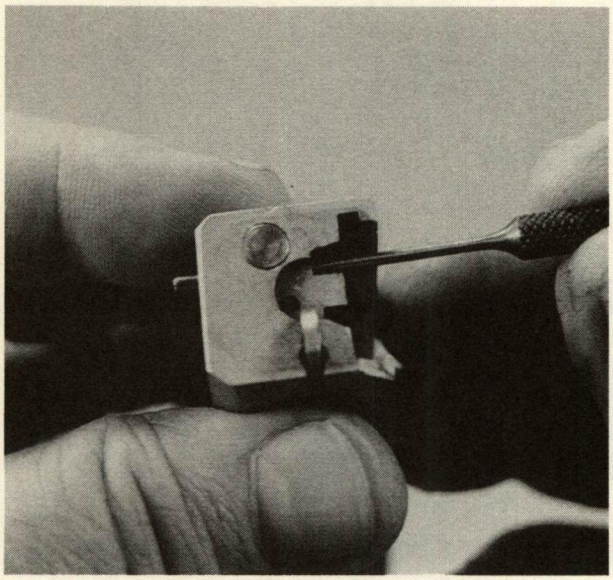




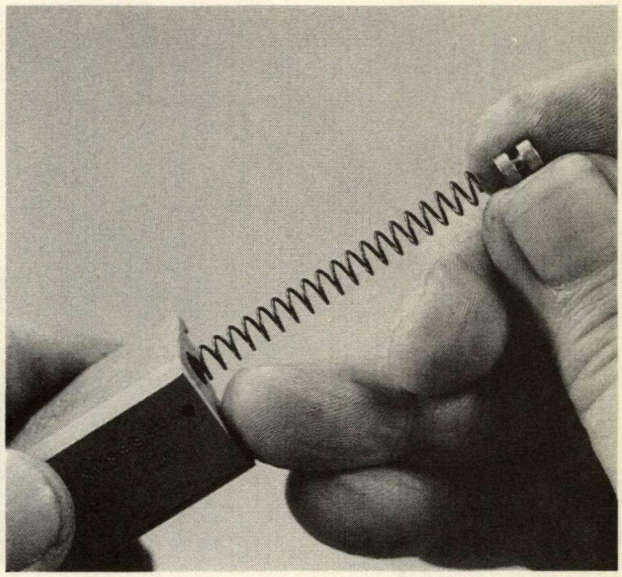
6. The firing pin is retained by a vertical roll pin. This can be driven out in either direction, and the firing pin and its spring are taken out toward the rear.

5. Insert a small tool between the extractor and its plunger, and push the plunger rearward. The extractor can then be tipped out toward the front. **Caution:** *Control the plunger and spring, and ease them out forward after the extractor is removed.*

7. A vertical roll pin near the front of the slide retains the recoil spring plug. **Caution:** *The spring is under tension. When withdrawing the drift after the pin is driven out, control the plug.*

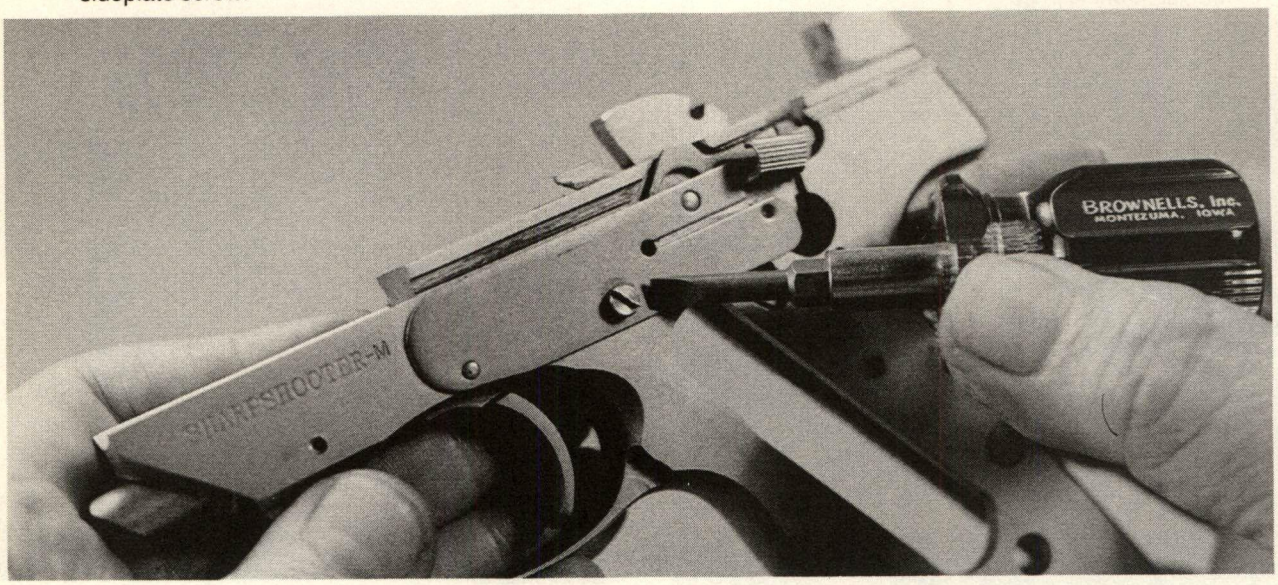


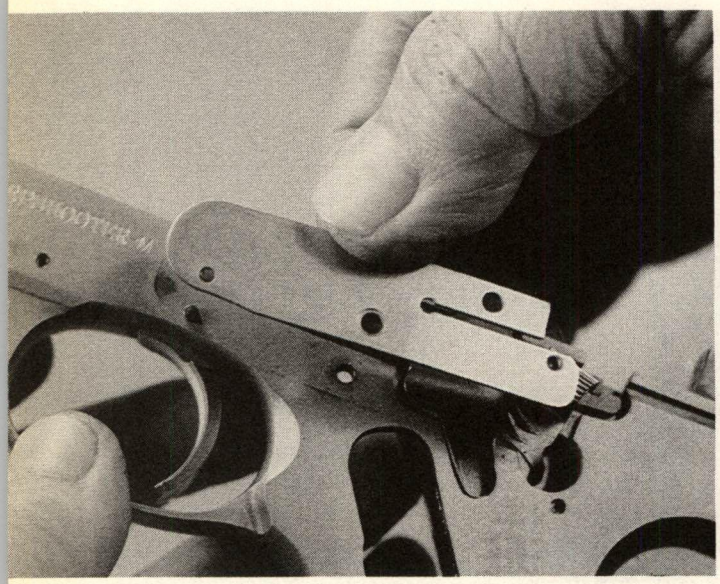
8. Remove the plug, spring, and spring guide toward the front.



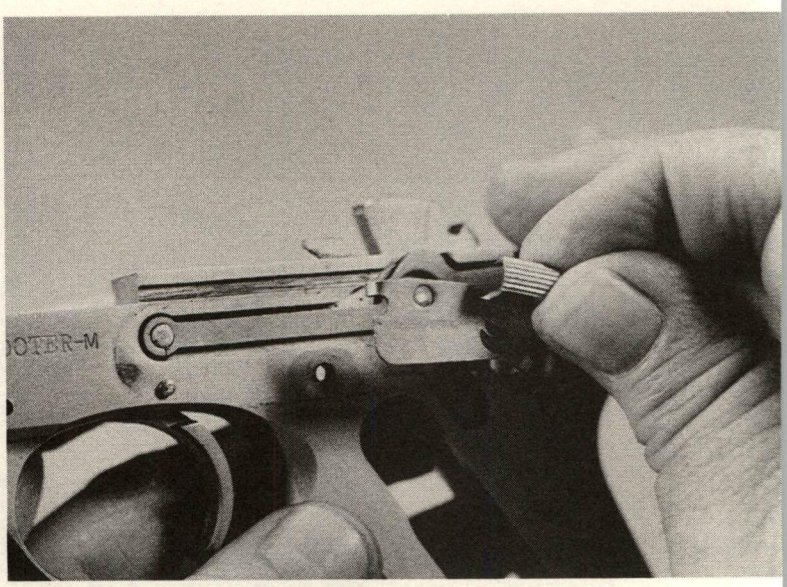
9. Restrain the hammer, pull the trigger, and ease the hammer to fired position. Remove the right grip panel. Tip the front pivot of the slide-latch out of its recess in the frame, and remove it. Take care that the small coil spring isn't lost.

10. Remove the left grip panel, and back out the sideplate screw.



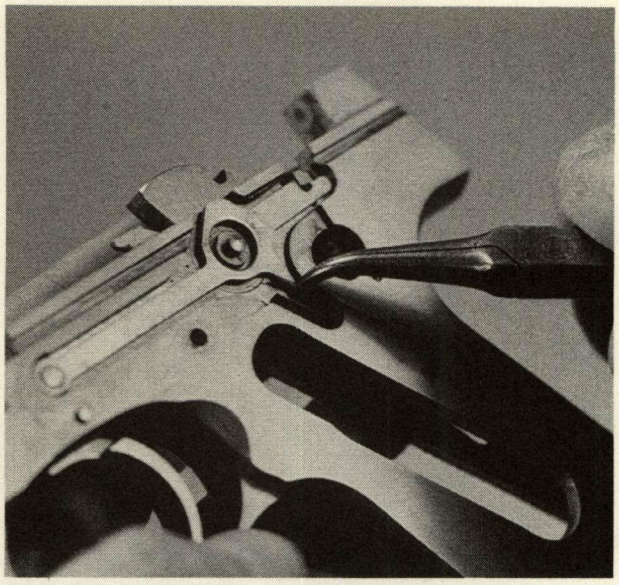


11. Lift the sideplate off the trigger and hammer pivot pins, and remove it.

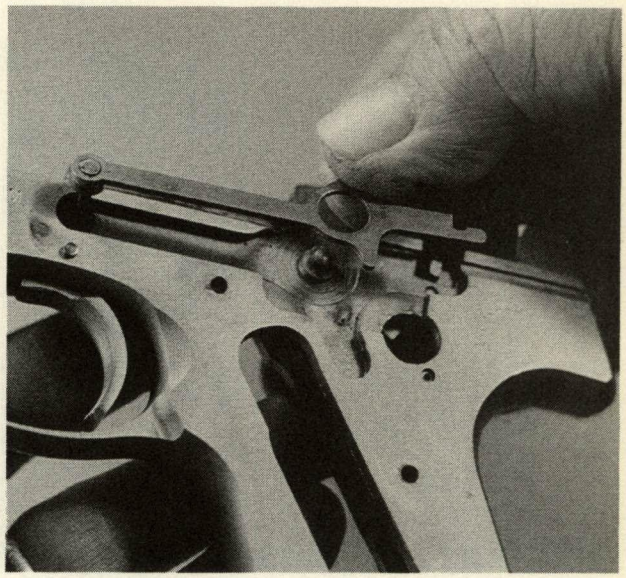


12. Lift the safety-lever off the hammer pivot, and remove it. Removal of the safety will expose the trigger bar spring. Restrain it until it is taken out.

13. Grip the trigger bar spring with pliers, and take it out of its recess. **Caution:** *The spring is under tension—control it.*

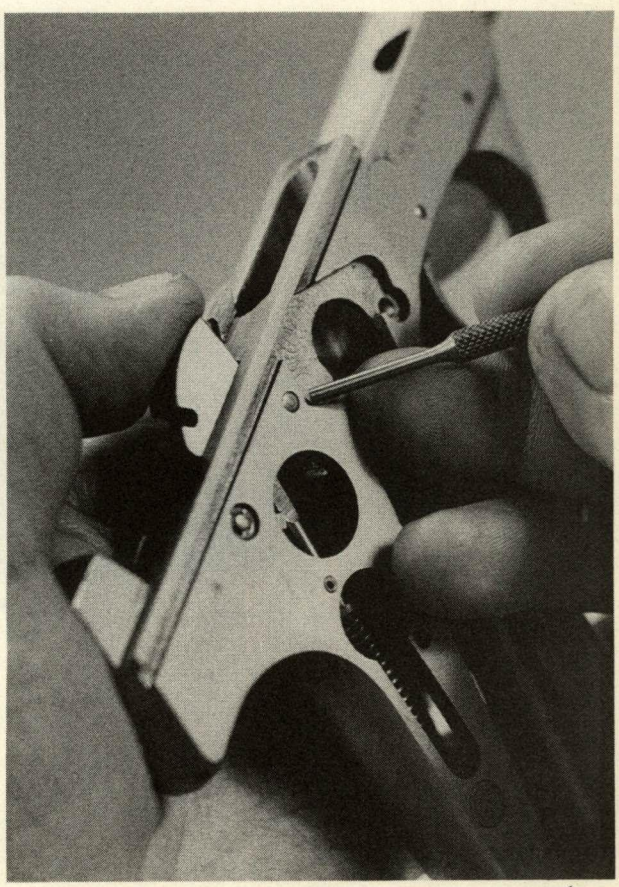


14. Remove the trigger bar toward the left.

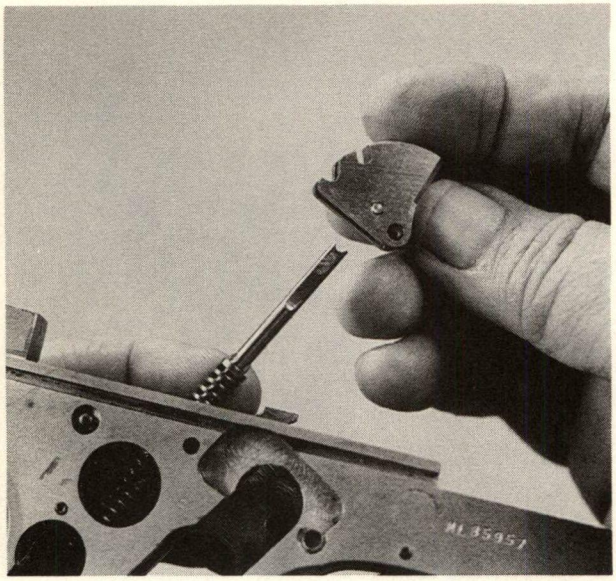


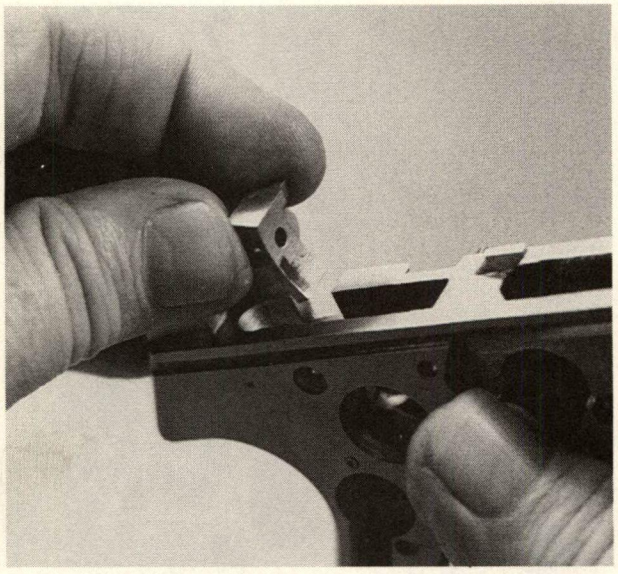
15. Drifting out its cross-pin will allow the trigger to be turned into the guard opening for removal.

16. Drive out the hammer pivot toward the left. Restrain the hammer as the drift punch is removed.



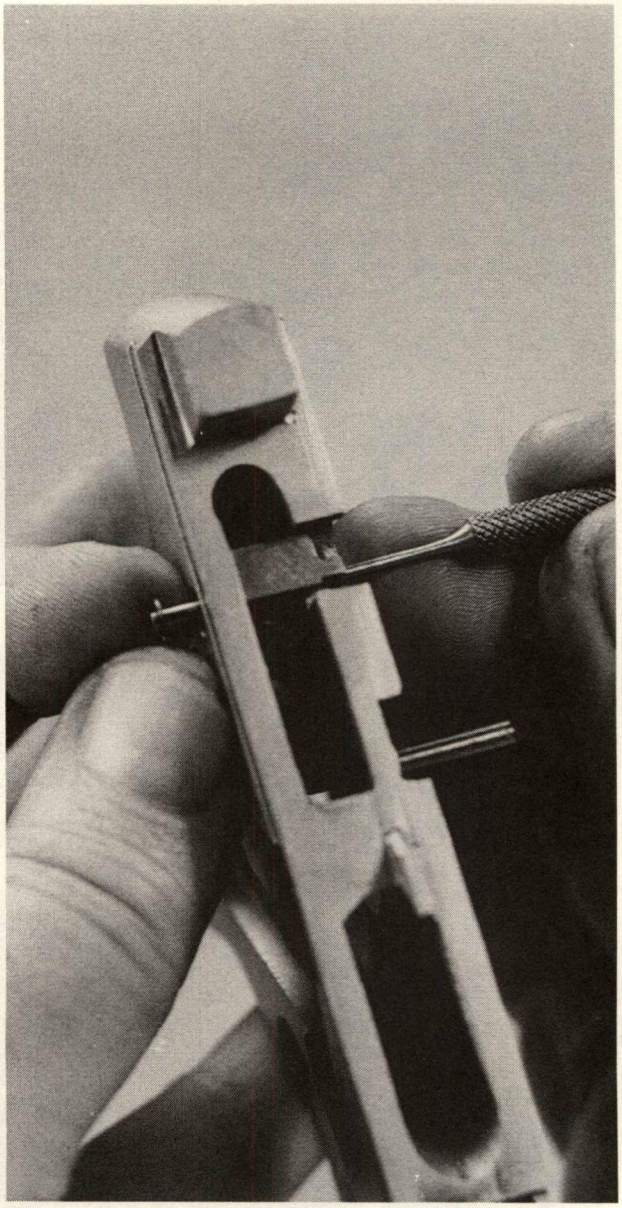
17. Ease the hammer out upward and remove it, along with the hammer strut and spring. Note that the strut cross-pin is not tightly fitted—take care that it isn't lost.



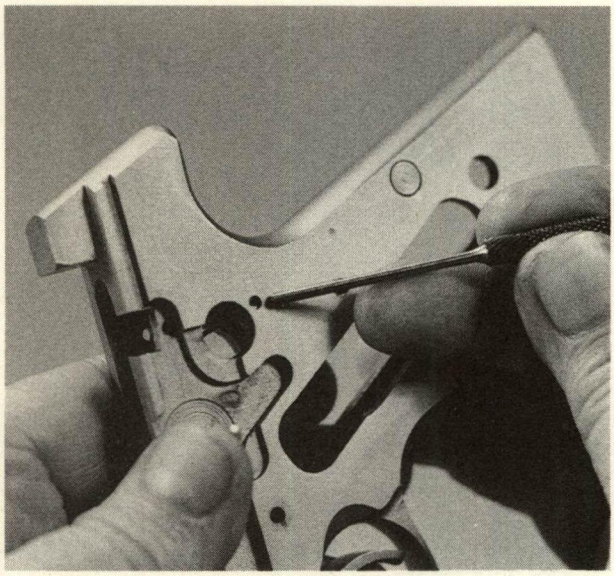


19. Restrain the sear as the drift is withdrawn, and remove the sear upward.

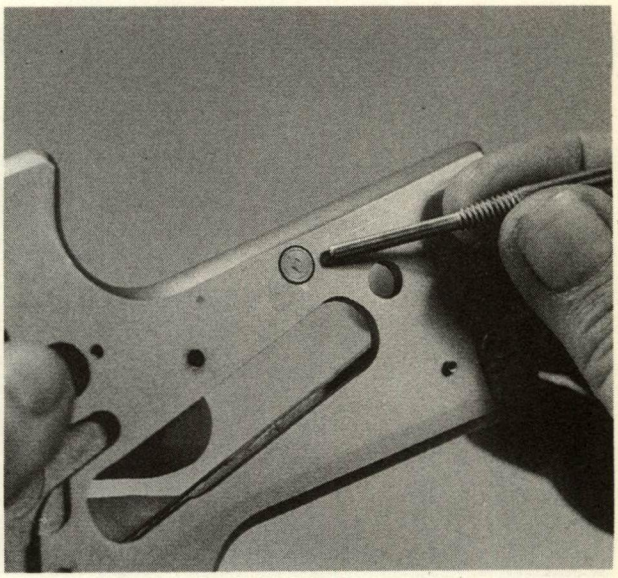
18. The sear cross-pin is easily pushed out of the frame toward the right. Note that its grooved right tip has a C-clip. In normal disassembly, the C-clip is not removed.

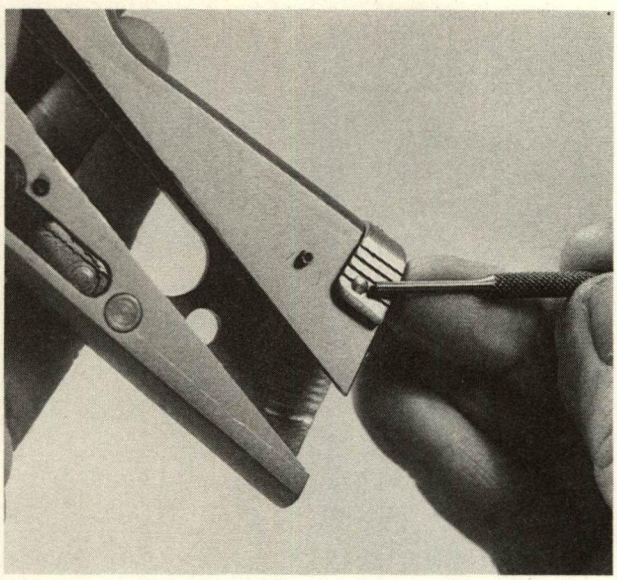


20. The sear spring is mounted on a roll pin in the frame. After the pin is driven out, the spring is taken out upward.

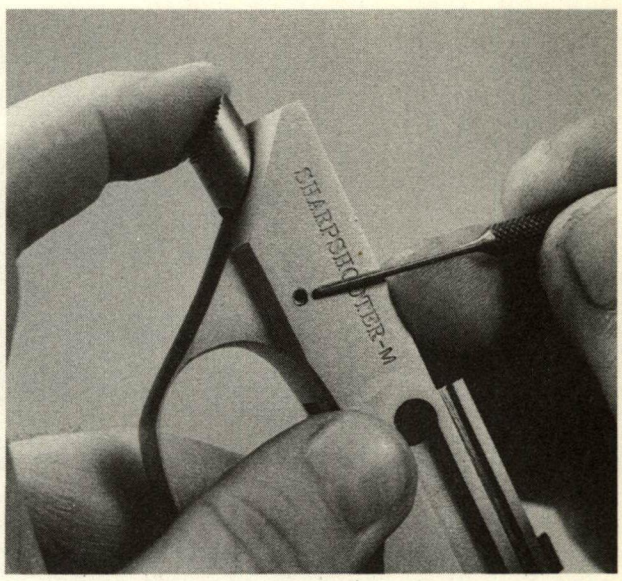


21. The hammer spring base can be pushed out of the frame toward either side, but in normal takedown it is best left in place. If it is removed, be sure it is replaced in the proper orientation for passage of the hammer spring strut.





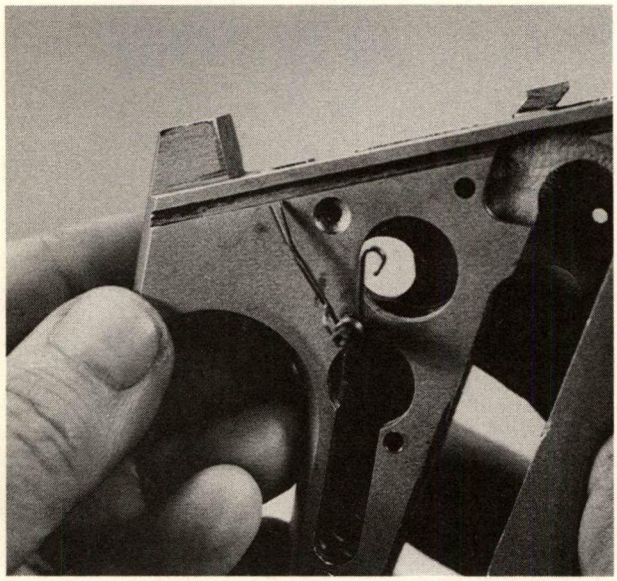
22. Drifting out the large cross-pin in the magazine catch will allow the U-shaped external piece to be taken off toward the front. **Caution:** *Removal of the pin will also free the internal plunger, spring, and catch rollers into the magazine well. Insert a shop cloth to catch them.* The small roll pin Just above the magazine catch is a grip stabilizing pin, and it retains no part.



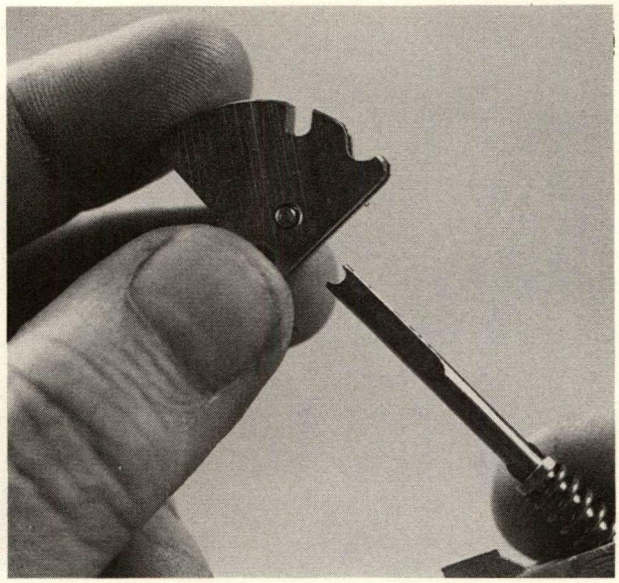
23. The barrel latch and its spring are retained by a roll cross-pin at the front of the frame. **Caution:** *This is a strong spring, and it is under tension, so control the latch button and ease it out.*

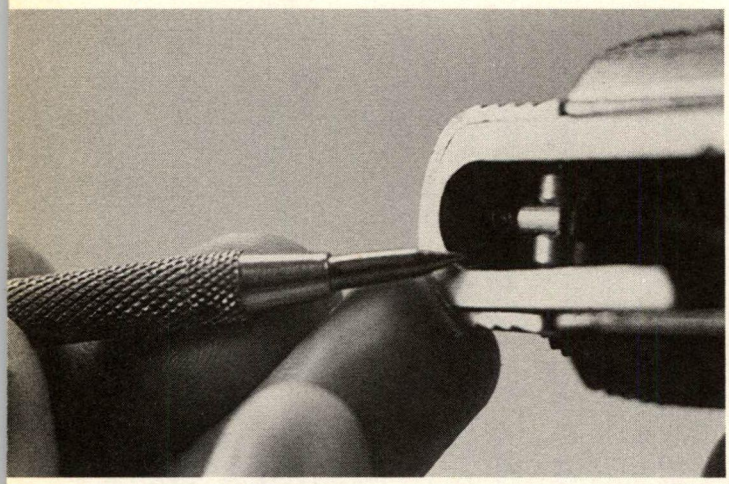
Reassembly Tips:

1. The sear spring is shown here on the outside, in the proper orientation for installation.

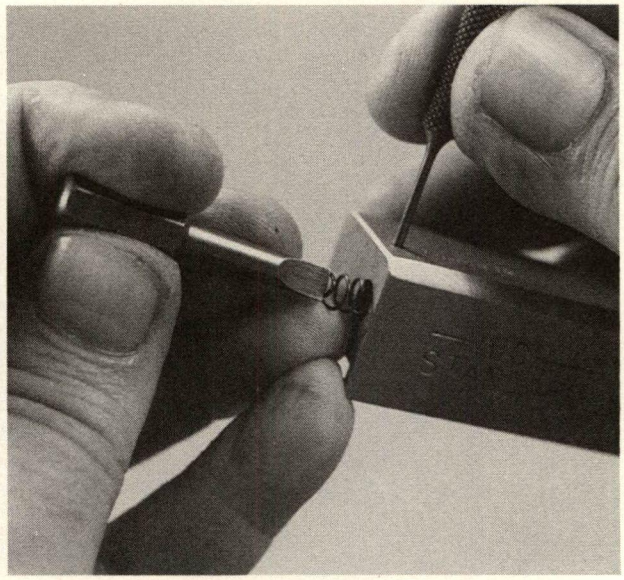


2. When replacing the hammer and hammer spring assembly, be sure the semi-circular cut in the top of the strut engages the cross-pin in the hammer. Remember also that the hammer pivot pin must protrude slightly on the left side, to pivot the safety and enter the hole in the sideplate.





3. If you have disassembled the magazine catch system, here is a view of the parts properly reassembled.



4. When replacing the recoil spring system, a small tool can be used to hold the spring while the plug is started into place. When the plug is positioned, insert a drift to hold it, pushing out the drift as the roll pin is driven in.

Interdynamic KG-99

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Interdynamic KG-99 also apply to the following guns.

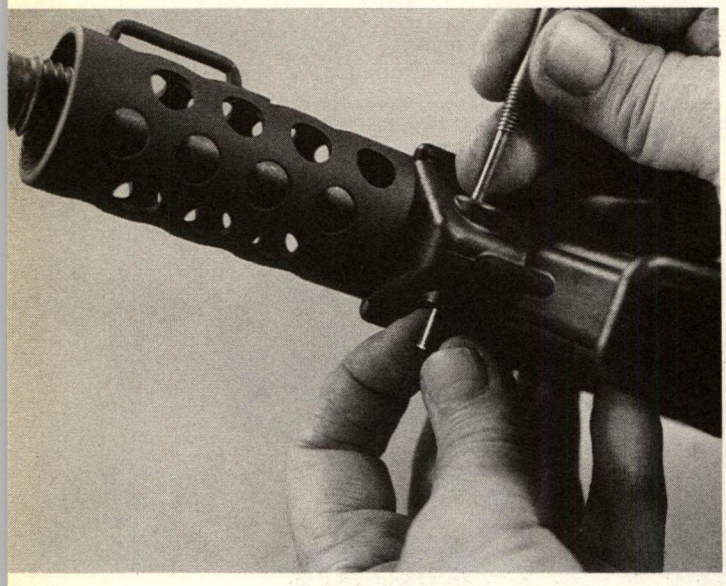
Intratec TEC-9
Intratec TEC-9M
Intratec TEC-9S
Intratec TEC-9MS

Data:	Interdynamic KG-99
Origin:	United States
Manufacturer:	Intratec, Miami, Florida
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	20 and 36 rounds
Overall length:	12 1/2 inches
Height:	6 1/2 inches
Barrel length:	5 inches
Weight:	45 ounces

The Interdynamic company became Intratec in 1984, and subsequent models of the pistol, now called the TEC-9, have some external differences from the original KG-99 shown here. Internally, though, the mechanism is the same, and the instructions will apply to the TEC-9 and its variations as made by Intratec. An earlier gun, the KG-9, had an open-bolt firing system, and there are some mechanical differences.

Field Strip:

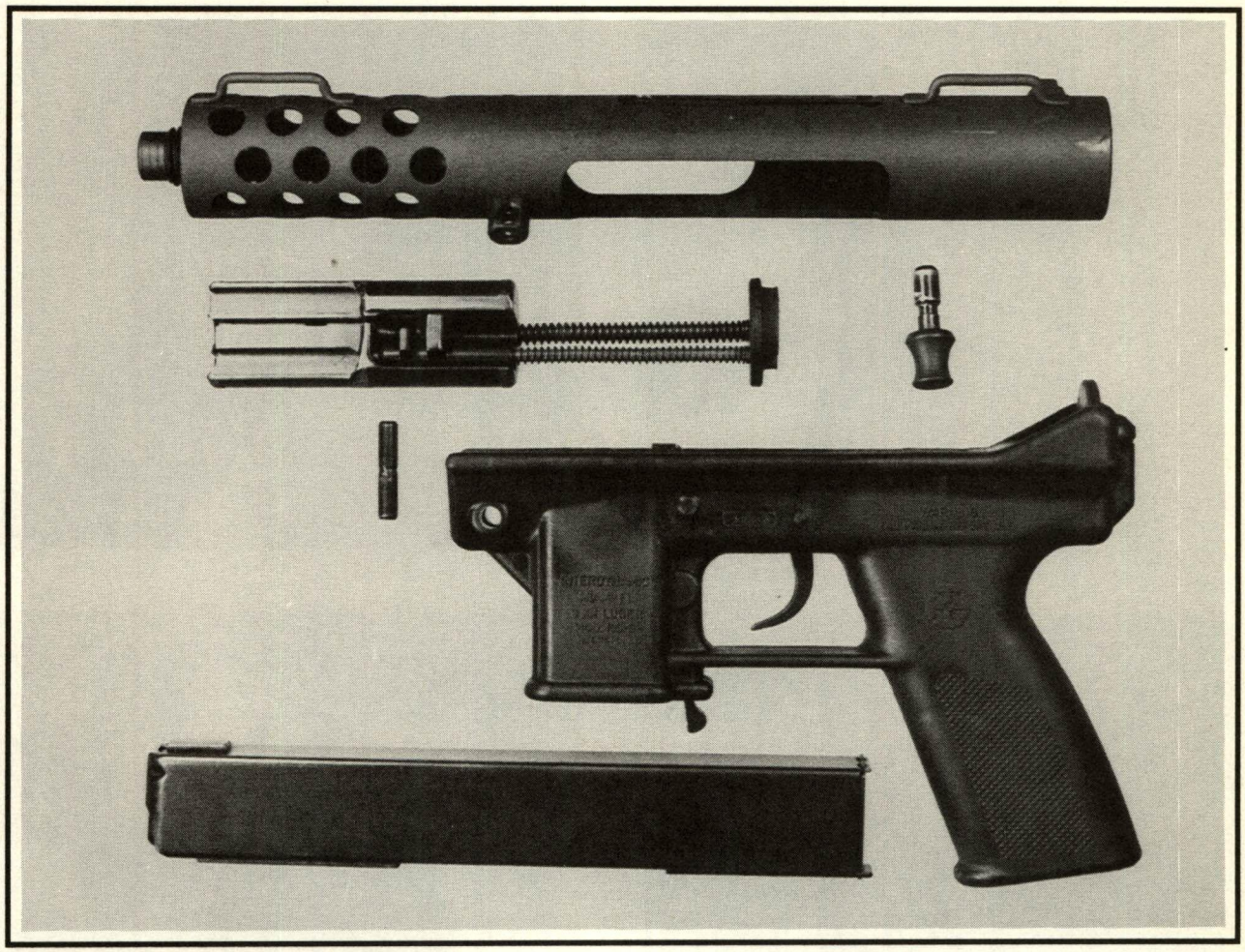
1. With the magazine removed, cycle the bolt to cock the striker, and push the cocking knob in to the on-safe position. Push out the large cross-pin at the front of the frame toward either side.



2. Lift the upper receiver at the front, to move its lug out of its well in the frame, and remove the upper receiver forward and upward.

3. Pull out the cocking knob to drop the striker to the fired position. Move the bolt assembly rearward until the knob aligns with the exit opening in its track. Pull the knob out of the bolt and receiver.

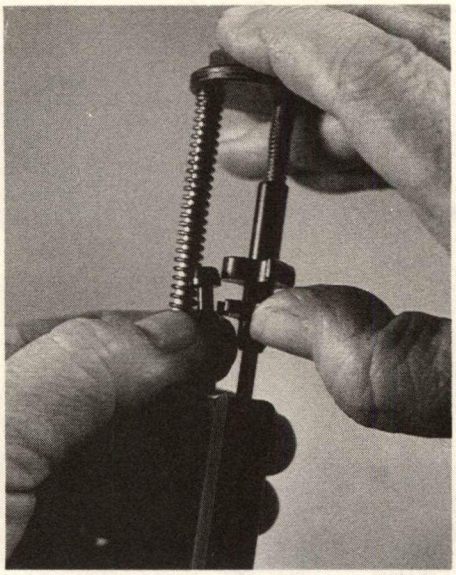
4. Remove the bolt assembly toward the rear. **Gun is now field-stripped.**



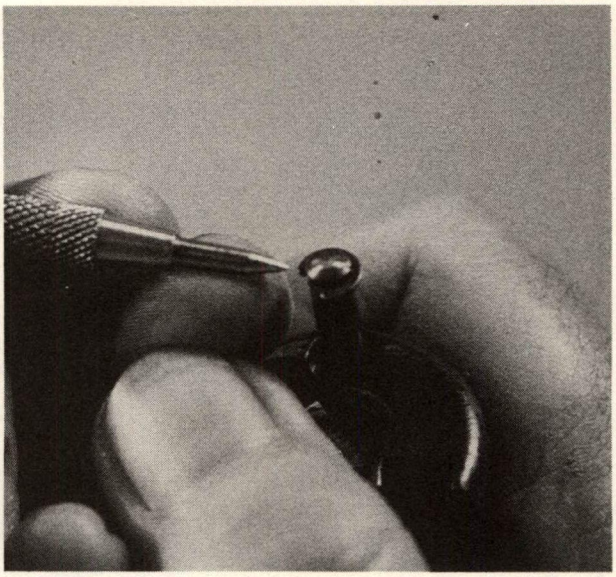
Interdynamic KG-99 field-stripped

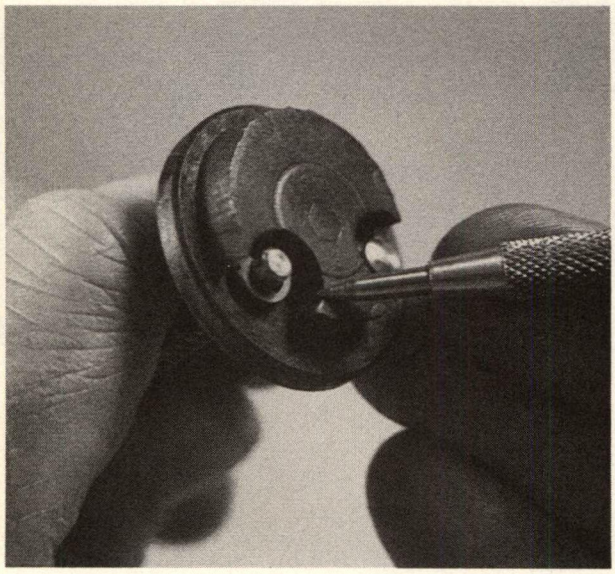
Detail Strip:

5. To remove the firing pin, pull the striker unit back until the firing pin can be tipped out of its socket.

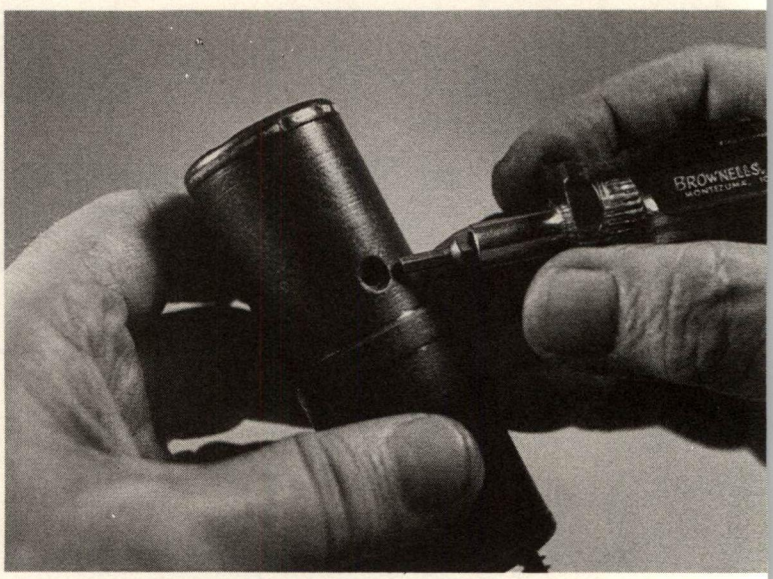


6. To remove the spring system from the bolt assembly, press the bolt back to expose the C-clip on the front tip of the recoil spring guide. Remove the C-clip, and take off the springs and guides toward the rear. **Caution:** *These are strong springs, and they are under tension, so control them.* The striker will also be freed for removal.



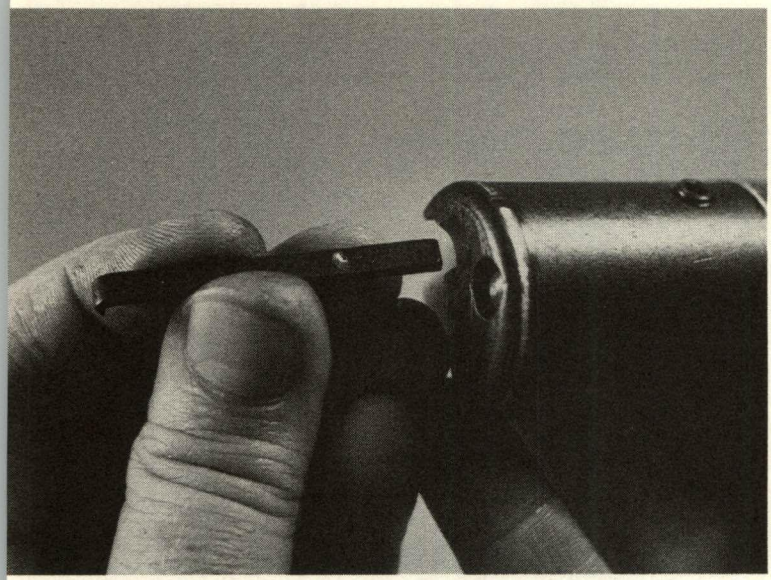


7. The spring guides are removable from the buffer and buffer plate by taking off the C-clips at the rear, but in normal takedown these are best left in place.

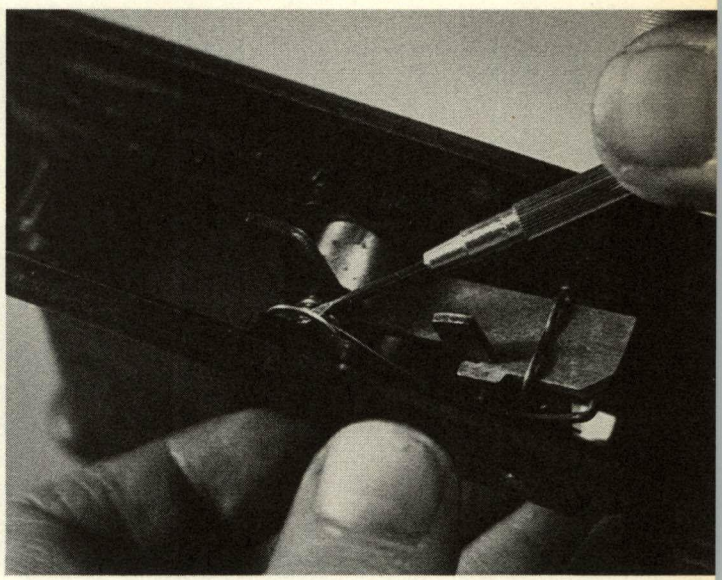


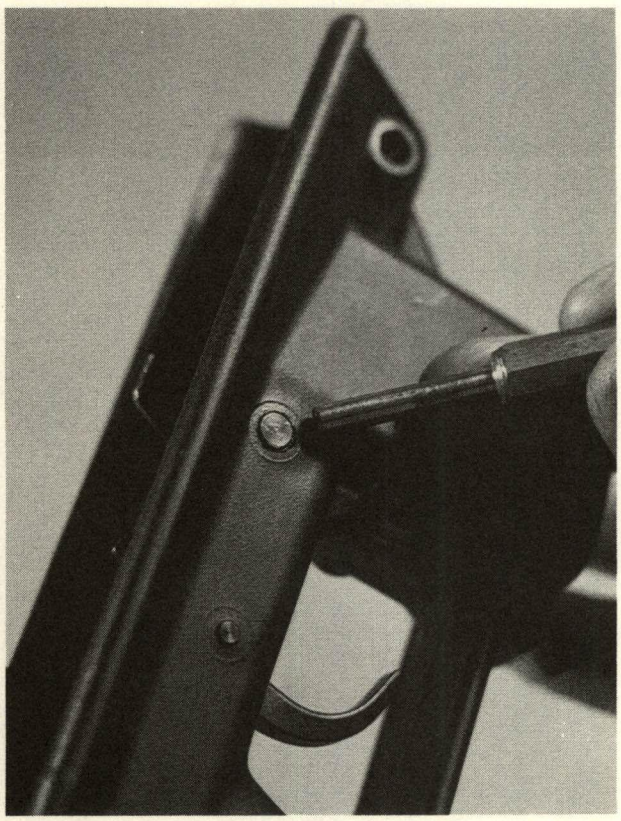
8. The extractor is retained by a large Allen screw in the bolt. Backing it out slightly will free the extractor for removal.

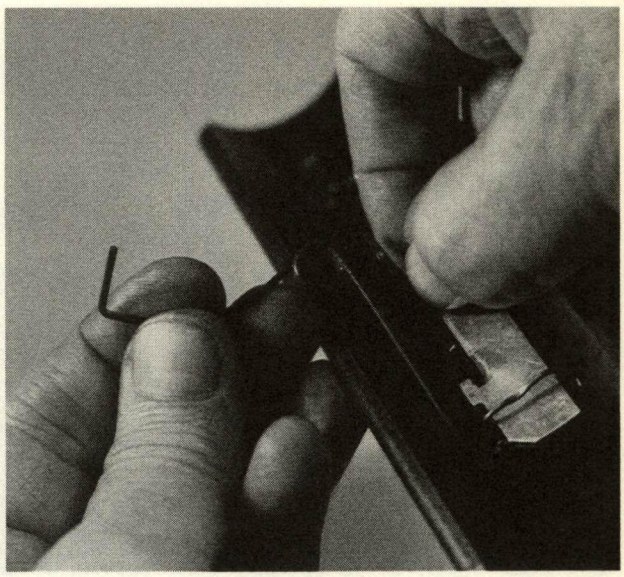
9. Remove the extractor toward the front.



10. Remove the large C-clip from the cross-pin at the front of the frame.



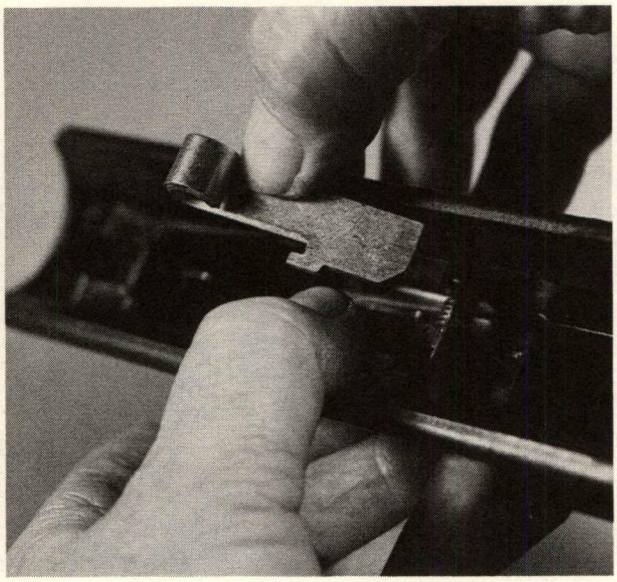




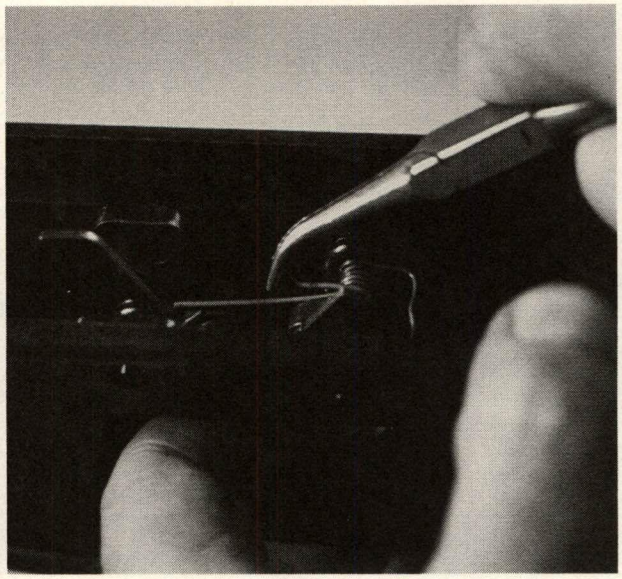
12. Depress the disconnector and move the sear forward until its spring can be disengaged at the rear. **Caution:** *This strong torsion spring is under tension.* Remove the spring forward and upward.

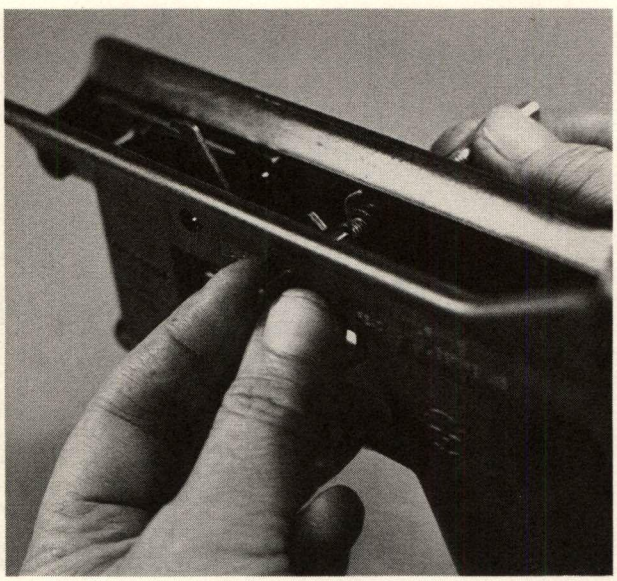
11. Drive out the cross-pin toward the left.

13. Move the sear forward until it clears the sear retainer at the rear, and take it out upward.

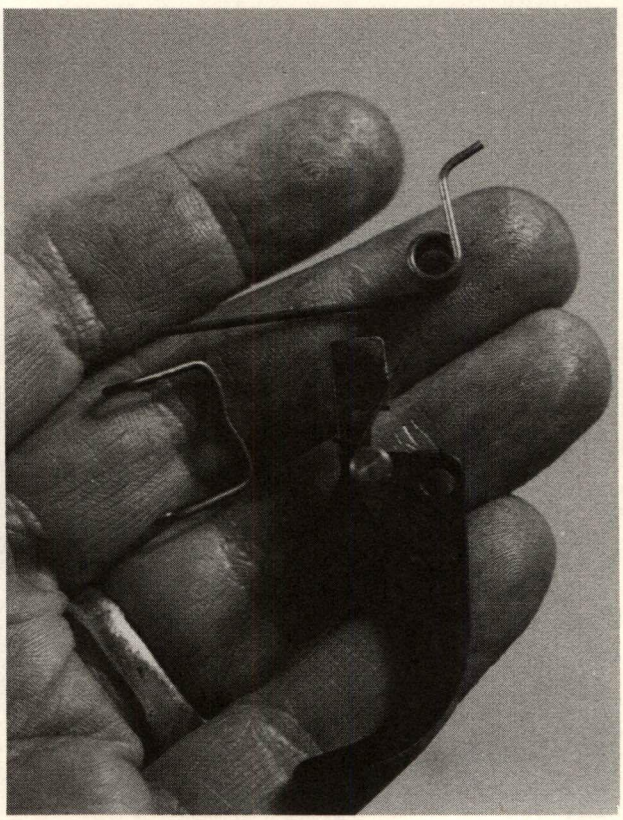


14. Use slim pliers to unhook the short arm of the trigger spring from its groove in the right end of the disconnector pivot.



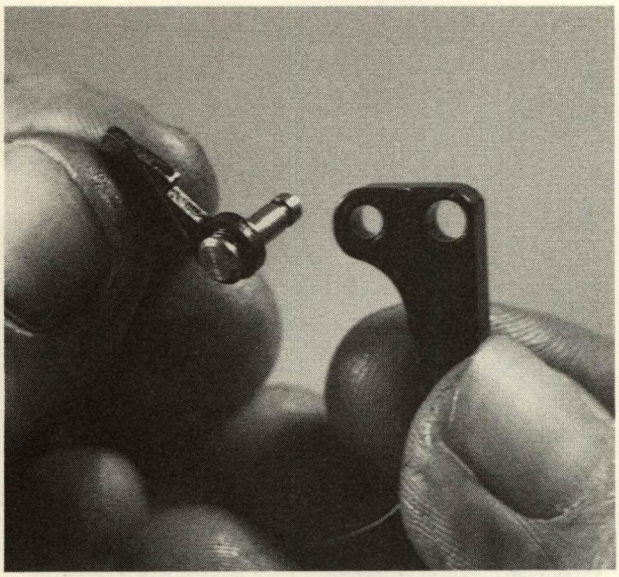


15. Push out the trigger pin toward either side.

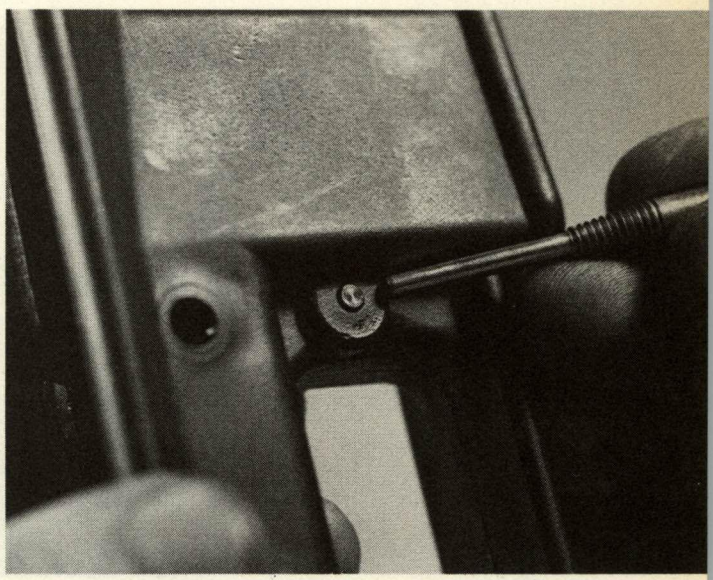


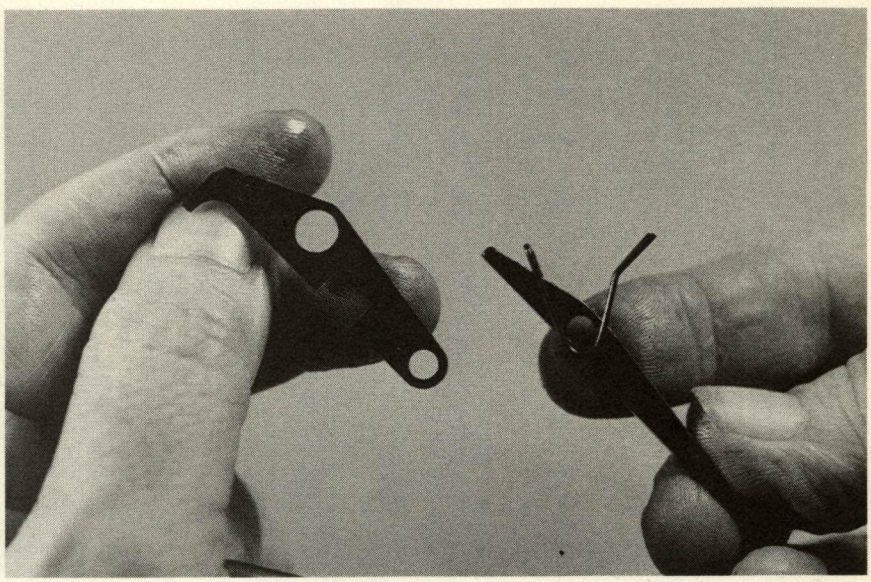
16. Remove the trigger system upward.

17. The disconnector and its pivot and spring are easily detached from the front of the trigger.



18. Drift out the magazine catch cross-pin.

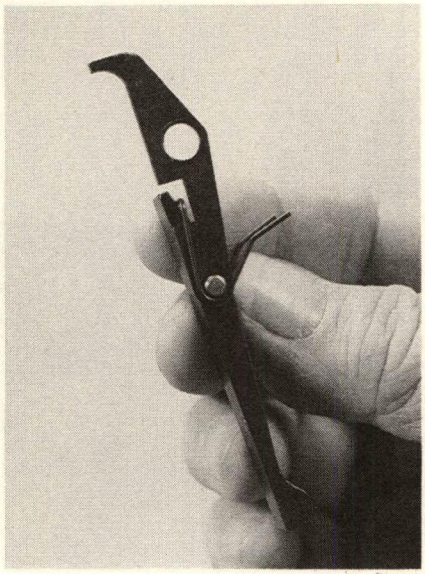




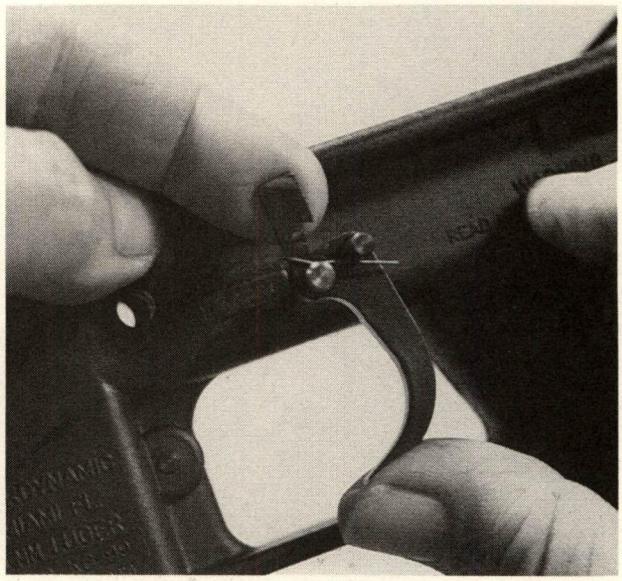
19. Remove the magazine catch, catch spring, and ejector.

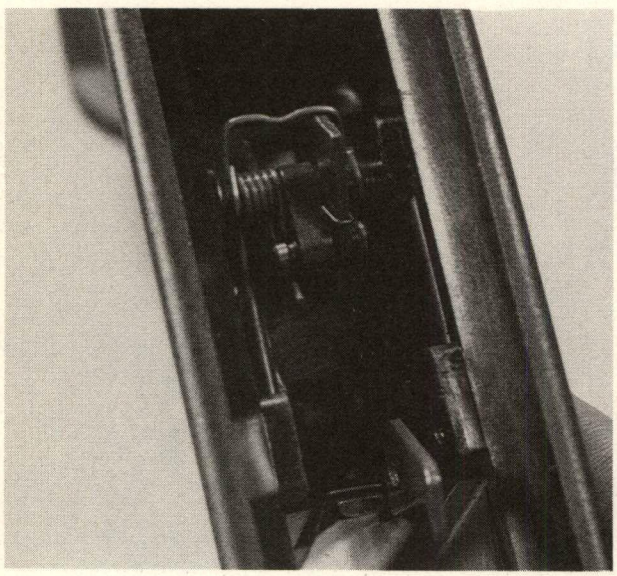
Reassembly Tips:

1. Installation of the magazine catch, its spring, and the ejector will require the use of a slave pin. The proper arrangement is shown.

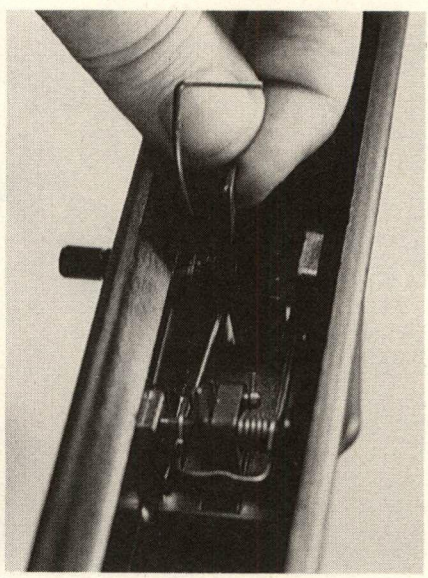


2. The trigger system is shown here in the proper arrangement for installation. Push the trigger cross-pin about one-third of the way in, engage the left loop of the sear retainer, then place the long arm of the disconnector spring beneath the pin. During insertion of the trigger, be sure the arch of the sear retainer is toward the rear.



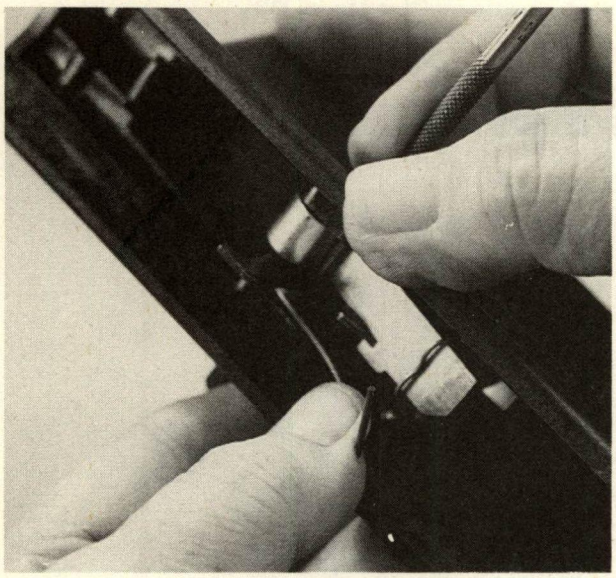


3. The trigger system is shown here properly installed

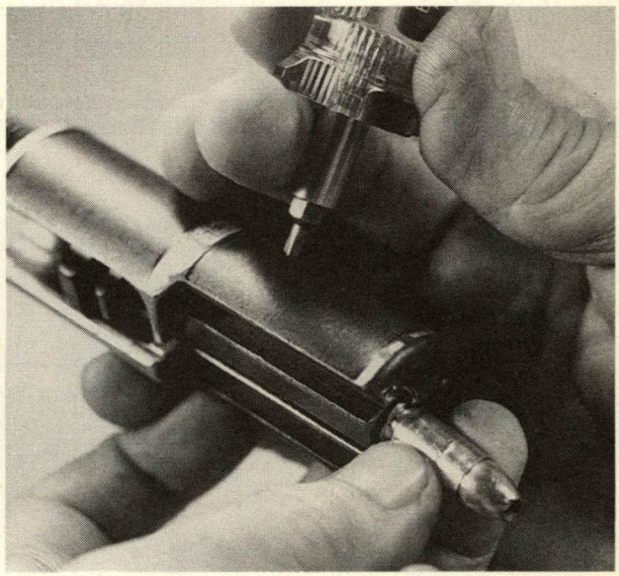


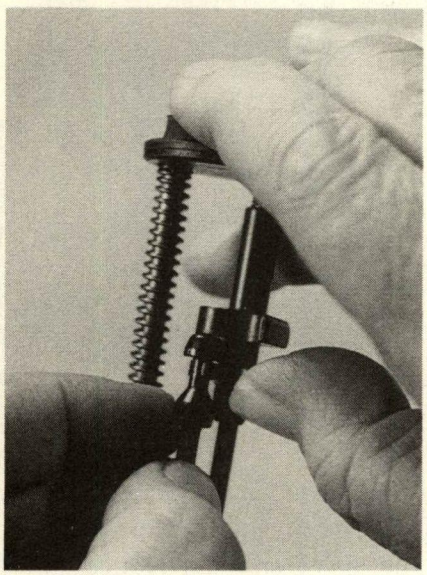
4. With the C-clip groove on the left, insert the sear cross-pin about half-way. Install the sear spring and engage the hole in the ejector.

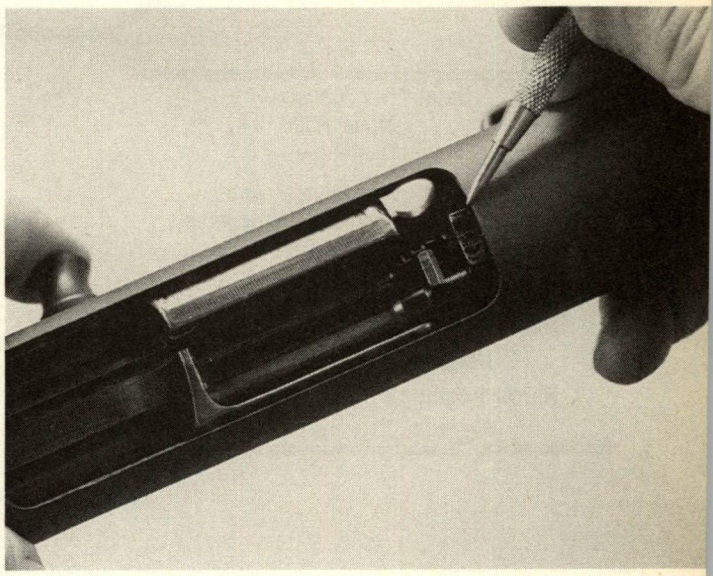
5. Hook the rear tip of the sear into its retainer, and insert a small drift to hold the sear toward the front while the sear spring is re-engaged.



6. When replacing the extractor, a dummy cartridge or a fired case can be used as a gauge to give the proper location before the screw is tightened. **Caution:** *Improper depth or alignment can damage the extractor when the screw is set.*







7. Replacing the firing pin in the striker is not difficult. The system is designed to prevent mis-assembly.

8. Before replacing the upper receiver on the frame, draw the striker back to the position shown, and push in the bolt handle to hold it there. This will make insertion of the cross-pin easier.

Iver Johnson X300 Pony

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Iver Johnson X300 Pony also apply to the following guns.

Star Model BM
Star Model BKM
Star Model DK
Star Model S
Star Model SM
FI Model D

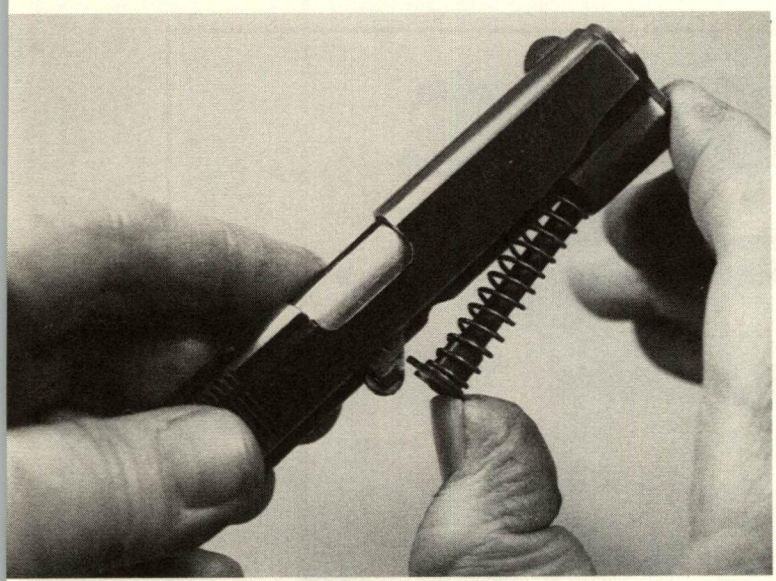
Data:	Iver Johnson Model X300 Pony
Origin:	United States
Manufacturer:	Iver Johnson Arms, Middlesex, New Jersey
Cartridge:	380 ACP
Magazine capacity:	6 rounds
Overall length:	6 inches
Height:	4 1/4 inches
Barrel length:	3 1/8 inches
Weight:	20 ounces

This neat little gun began just over 30 years ago as the Star Model DK. At one time there were plans to make it as the Colt Pony, but some snag developed and this never happened. Later, the pistol was produced in the U.S. by Firearms International, and it was sold for a time as the FI Model D. Then, for a while, Iver Johnson made it as the X300 Pony. At the time this is written, it is no longer in production. The basic Star construction of this gun is close to the mechanism of the larger Star BM and BKM 9mm pistols, and the medium-frame 380 ACP. The instructions will generally apply.

Field Strip:

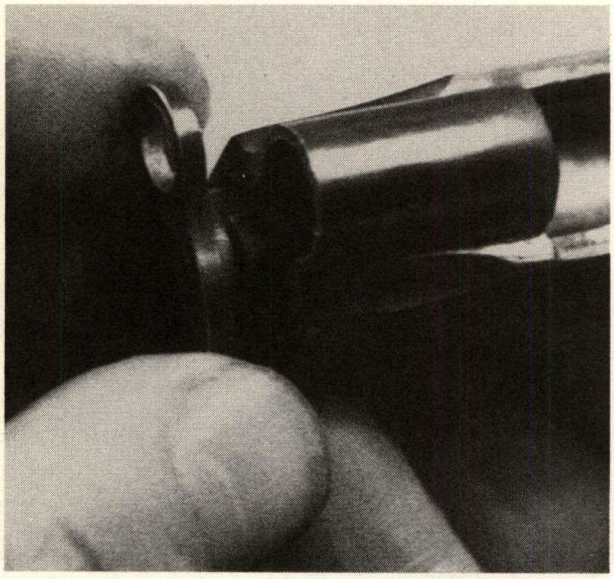
1. With the magazine removed and the hammer cocked, pull the slide to the rear and lock it in place with the safety catch. Push on the exposed end of the slide-latch shaft on the right side of the frame, and remove the slide-latch toward the left.

2. Holding the slide against the tension of the recoil spring, release the safety and run the slide assembly forward off the frame.

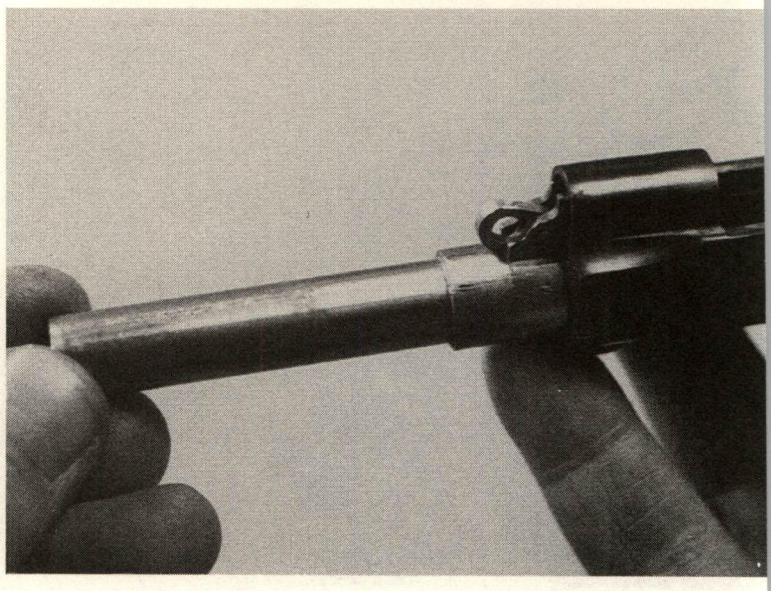


3. Lift the recoil spring guide at the rear to clear the barrel link, and remove the guide and spring toward the rear.

4. Turn the barrel bushing toward the left side of the slide until its lug aligns with the open track in the slide, and remove the bushing toward the front.



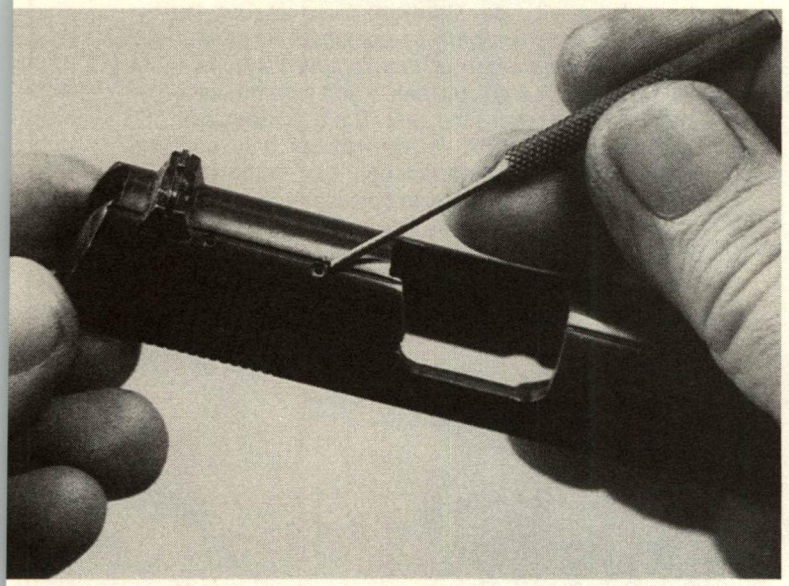
5. Tip the barrel link forward and remove the barrel toward the front of the slide. **Gun Is now field-stripped.**



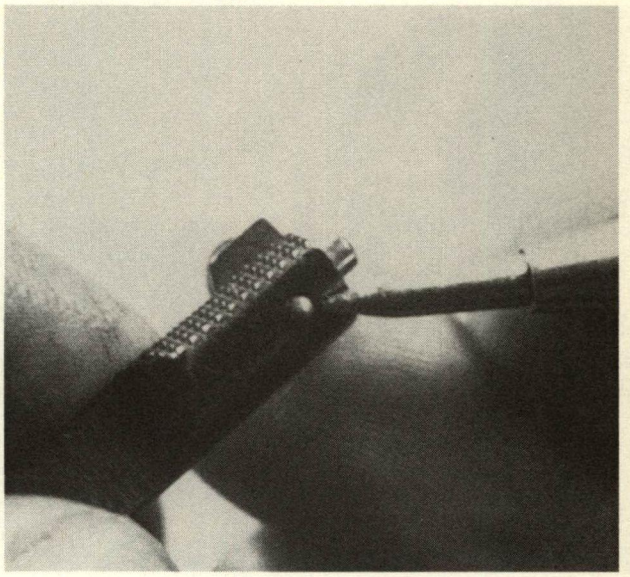
Iver Johnson X300 Pony field-stripped

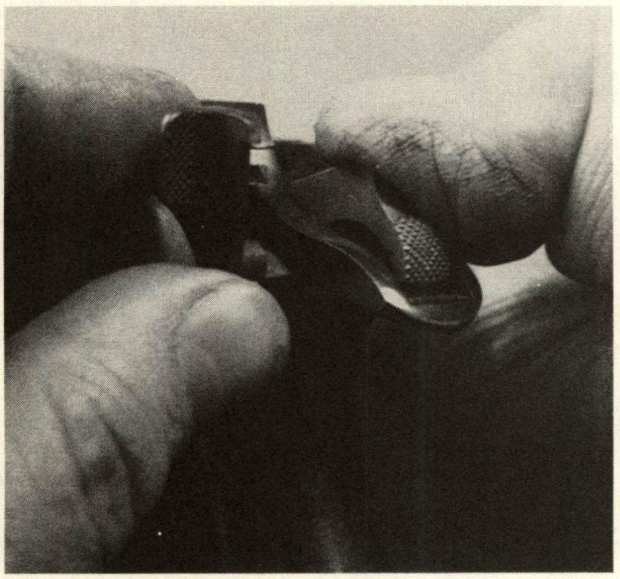
Detail Strip:

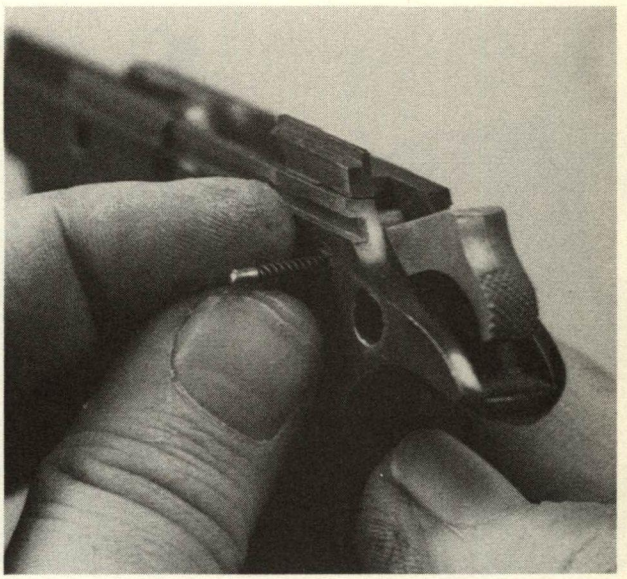
6. The extractor is tempered to be its own spring, and is retained by two vertical roll pins on the right side of the slide. Removal of the rear sight will expose a vertical pin which retains the firing pin, and is easily pushed out from the underside of the slide.



7. A small horizontal pin in the slide-latch retains its plunger and spring.



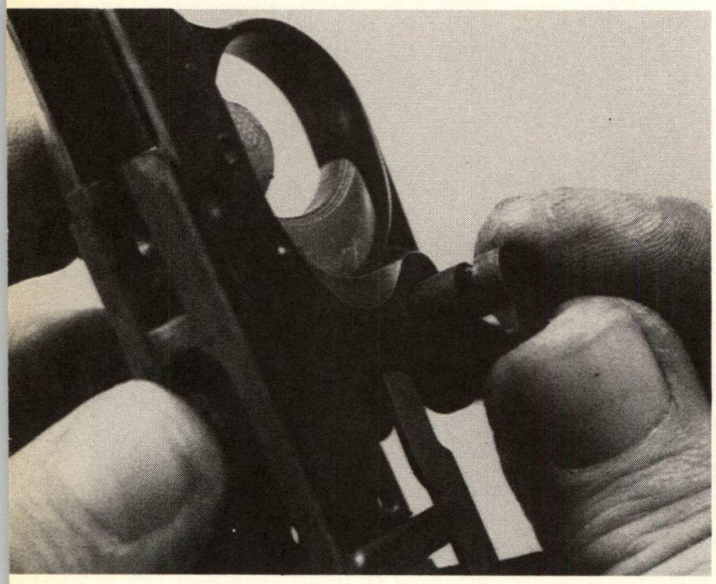


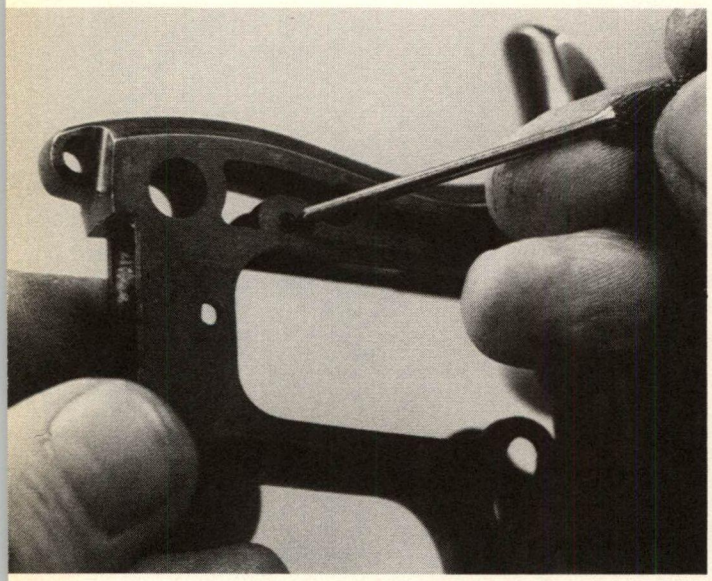


8. With the hammer depressed beyond the full-cock position, and held there, rotate the safety-lever to vertical position and remove it toward the left. **Caution:** *The safety spring and plunger will be released as the lower edge of the safety-lever clears the center of the hammer pivot, so restrain them with a fingertip.*

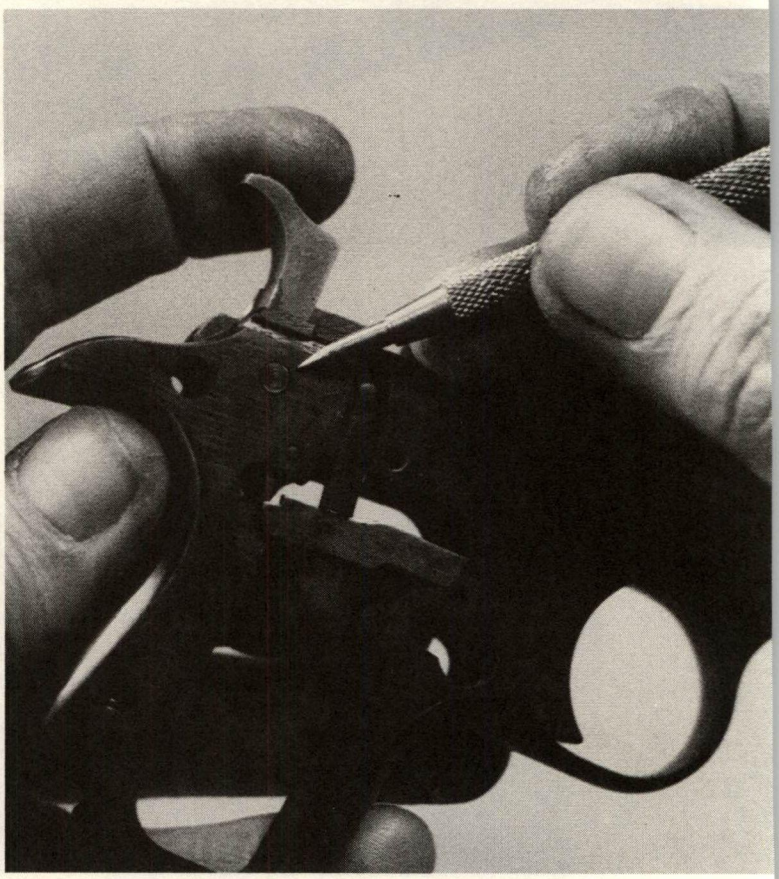
9. Remove the safety spring and plunger from their hole in the hammer pivot.

10. The magazine release is removed in the same manner as the one on the U.S. Model 1911 pistol. The release button is depressed even with the frame, and the screw-slotted retainer on the right side is turned to the left until its internal lug locks into a slot in the body of the release. The magazine release can then be taken out toward the right.



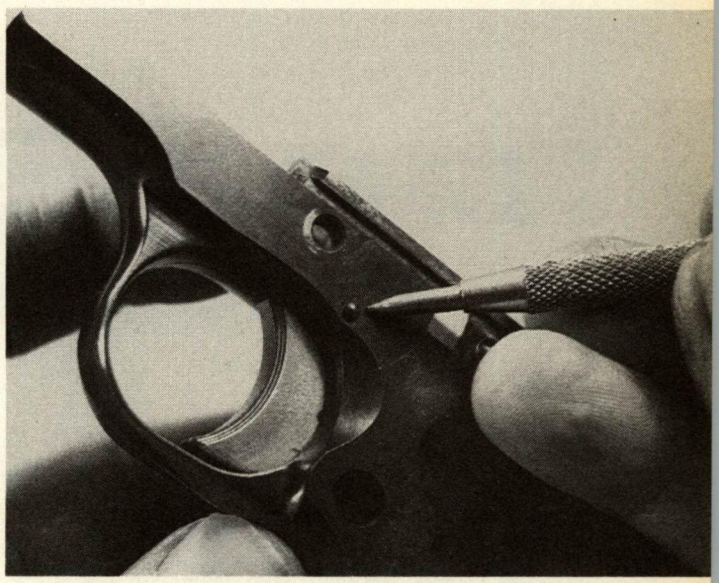


11. With the hammer at rest, restrain it with downward pressure on top, and push out the hammer pivot toward the left side. **Caution:** *Even at rest, the hammer spring is slightly compressed. Be careful, and ease the hammer out, then remove the follower and spring.*The small pin below and forward of the hammer pivot retains the sear. The disconnector is slid down out of its vertical recess only after removal of the trigger and trigger bar. Removal of the ejector and its base is not advisable except for replacement. If it is to be taken off, the small pin directly above the sear pin must be drifted out from left to right, and the ejector removed straight up off the frame.

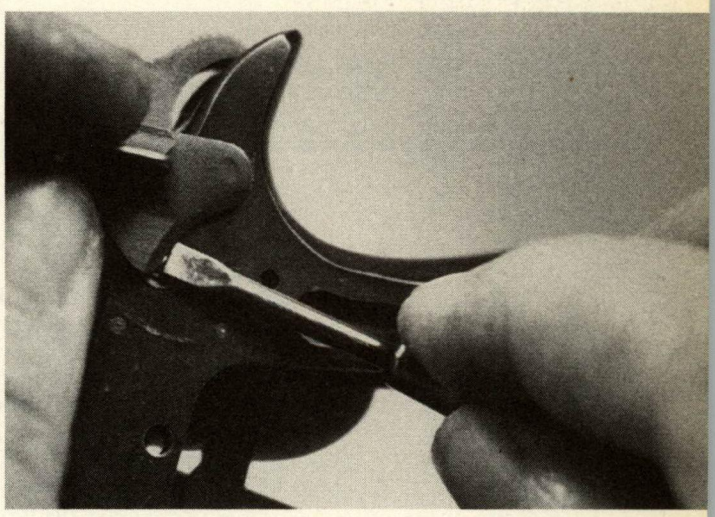


12. The sear spring is retained by a roll pin in the lower rear section of the grip frame. Use a special roll pin punch to remove the pin, and take out the spring forward, into the magazine well.

13. The trigger assembly is retained by a cross-pin. After removal of the cross-pin, move the trigger to the rear, into the magazine well, springing the trigger bar slightly outward to clear the rear of the grip frame. A small cross-pin holds the bar to the trigger, and when this is drifted out it will release a spring and plunger mounted inside the trigger. **Caution:** *This spring is under tension. Remove carefully to avoid injury or loss of the spring and plunger.*



Reassembly Tips:



1. When replacing the safety, remember to depress the hammer before insertion of the safety. When turning the safety back down to normal position, use a small screwdriver to hold the safety spring and plunger pushed in until the edge of the safety covers it. **Caution:** *Guard against escape of the spring and plunger.*

When replacing the slide stop, depress its plunger with a thumbnail to assist it in passing the outer end of its bearing stud on the frame.

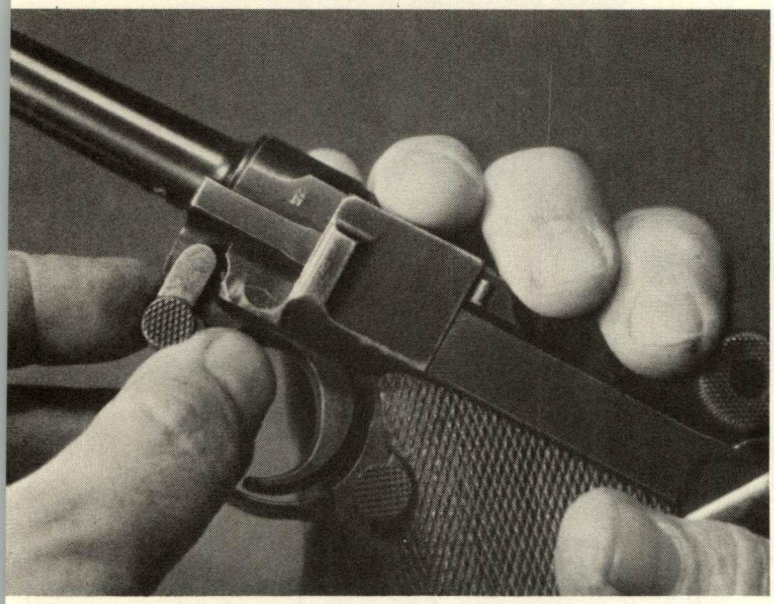
Luger

Data:	Luger (Pistole Parabellum)
Origin:	Germany, Switzerland
Manufacturer:	DWM, Mauser, and other commercial factories and government arsenals in Germany. The Swiss government arsenal in Bern.
Cartridges:	9mm Parabellum, 7.65mm Parabellum
Magazine capacity:	8 rounds
Overall length:	$8\frac{3}{4}$ inches
Height:	$5\frac{7}{16}$ inches
Barrel length:	Varies, standard military version is 4 inches
Weight:	30 ounces

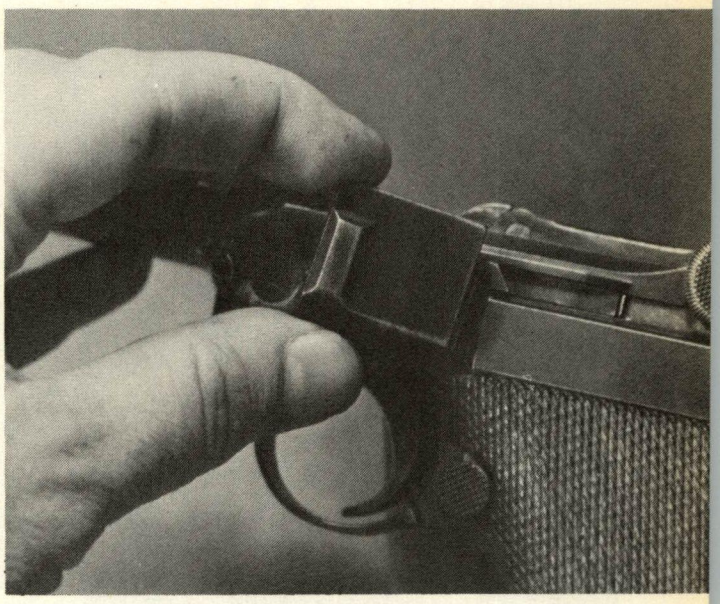
Anything said here about the legendary Luger is likely to be redundant and unnecessary. For those who came in late, the gun was based on an earlier design by Hugo Borchardt, refined and perfected by Georg Luger, and used as the military standard sidearm by Germany from 1908 to 1939. It was used for an even longer period by the Swiss, and had both military and commercial sales in all parts of the world. In recent years, Mauser of Germany put the Luger back into production for a limited time, and these guns have a "Swiss-style" grip safety. Very early Lugers will have a flat recoil spring and other differences, but those are rarely seen outside of collections.

Field Strip:

1. Move the barrel and bolt assembly toward the rear until the toggle knobs touch the ears at the rear of frame, and turn the takedown lever on the front left of the frame down to the vertical position.

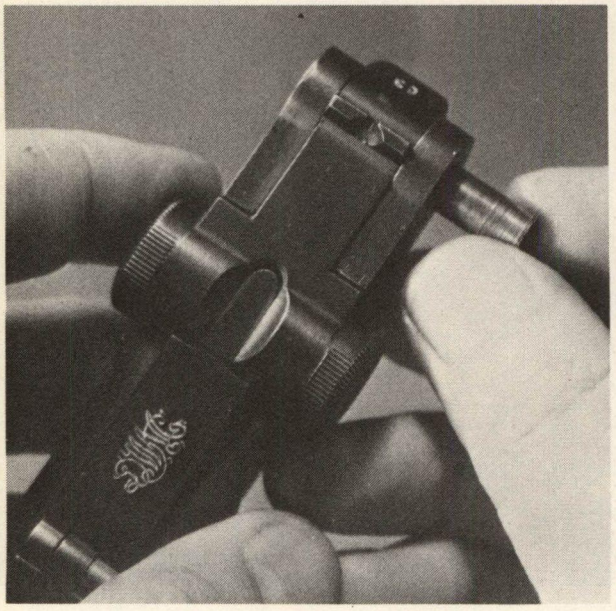


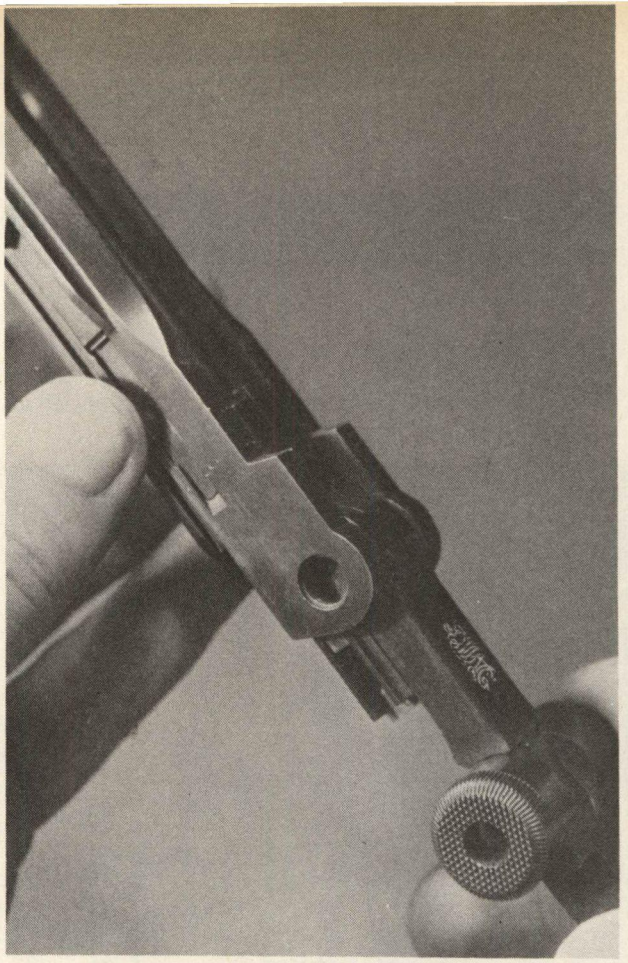
2. While holding the barrel and bolt assembly, lift the sideplate above the trigger at its front, move it forward to free the rear flange, and remove it from the frame.



3. Run the barrel and bolt assembly forward off the frame.

4. Remove the large cross-pin at the rear of the barrel extension to release the toggle and breechblock assembly.



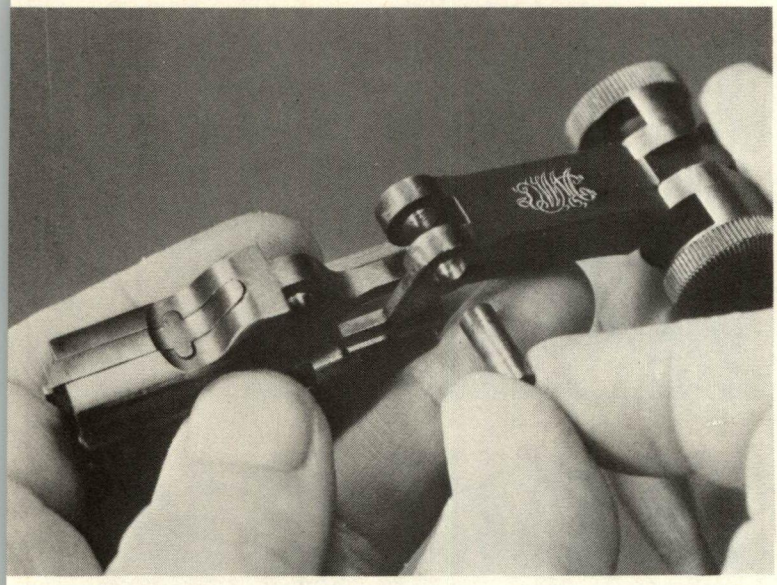


5. Slide the breechblock and toggle assembly out of the rear of the barrel extension. **Gun is now field-stripped.**

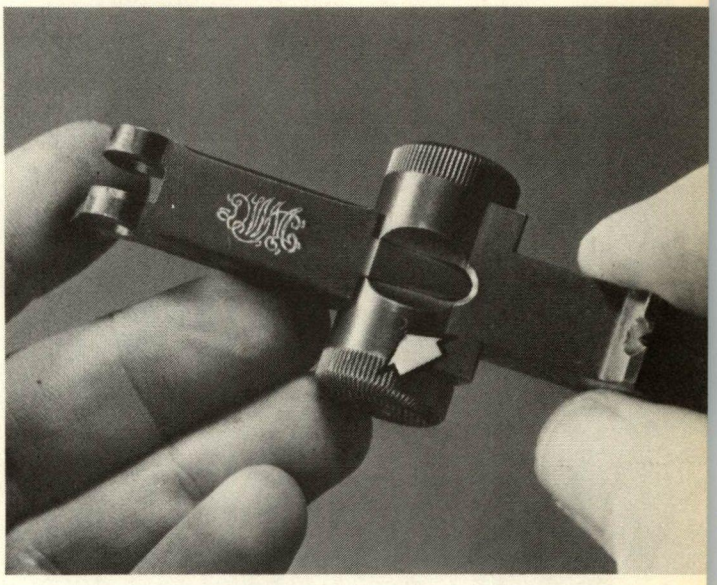
Luger field-stripped

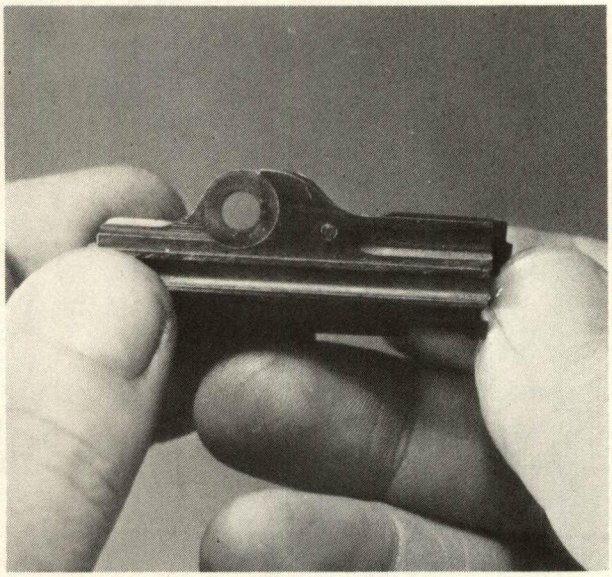
Detail Strip:

6. Remove the front cross-pin of the toggle assembly to free the breechblock for removal. **Note:** In some cases, this pin will be very tight. It should not be forced as this will likely cause deformation or breakage of parts.

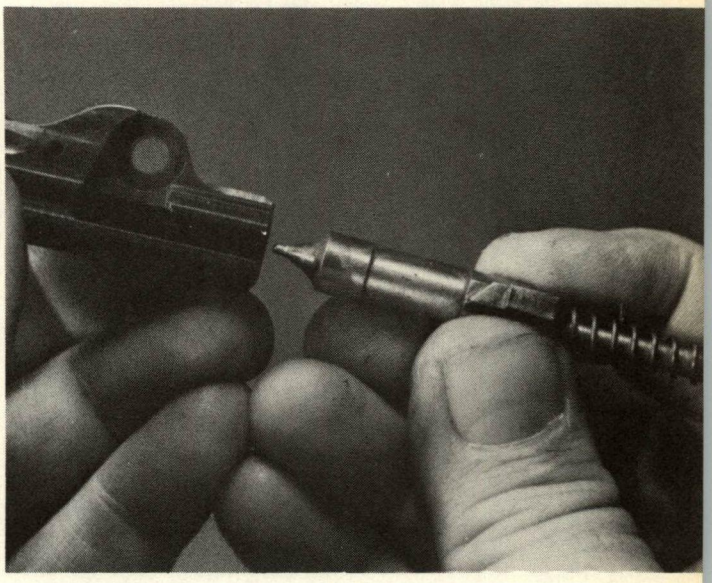


7. On top of the toggle knob piece, on the left side, a small pin is visible (arrow). This must be driven up, from the underside of the toggle, to free the large center pin of the toggle assembly. The large pin is then pushed out to the left. Unless takedown of this system is for refinishing, complete removal of the small pin is not necessary. Drifting out the small cross-pin at the rear of the toggle knob unit will allow removal of the S-shaped coupling link from the underside.



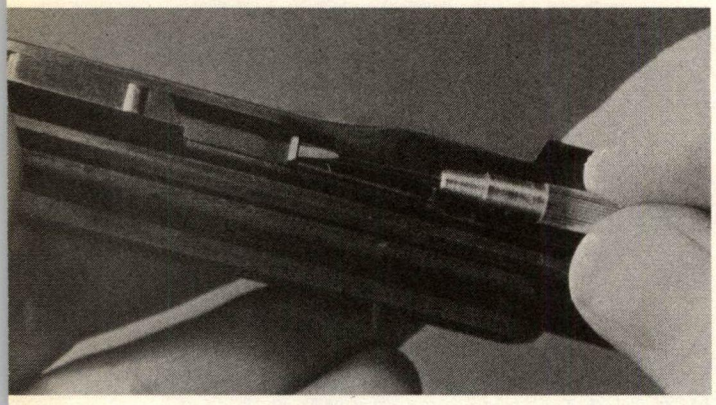


8. Drifting out the small cross-pin in the breechblock will release the extractor and its spring for removal.

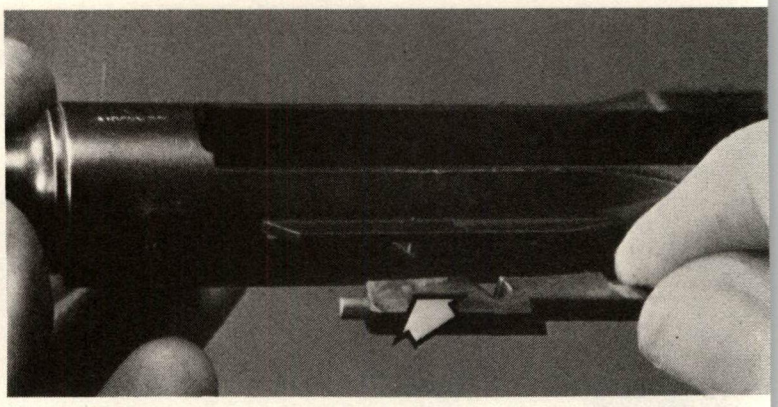


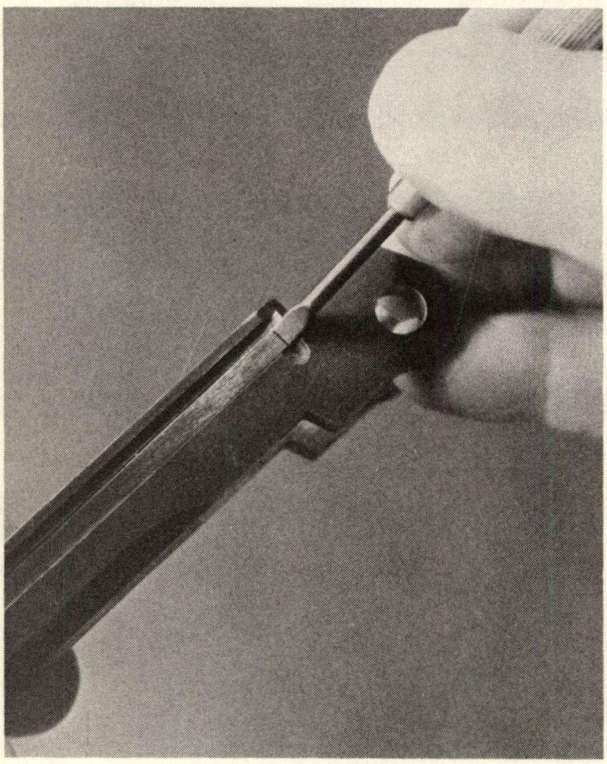
9. With a screwdriver or Luger takedown tool, push in the firing pin spring guide and retainer at the rear of the breechblock and turn it to the left until its lug aligns with the open track in the side of the breechblock. Ease the guide out to the rear, along with the spring and the striker (firing pin).

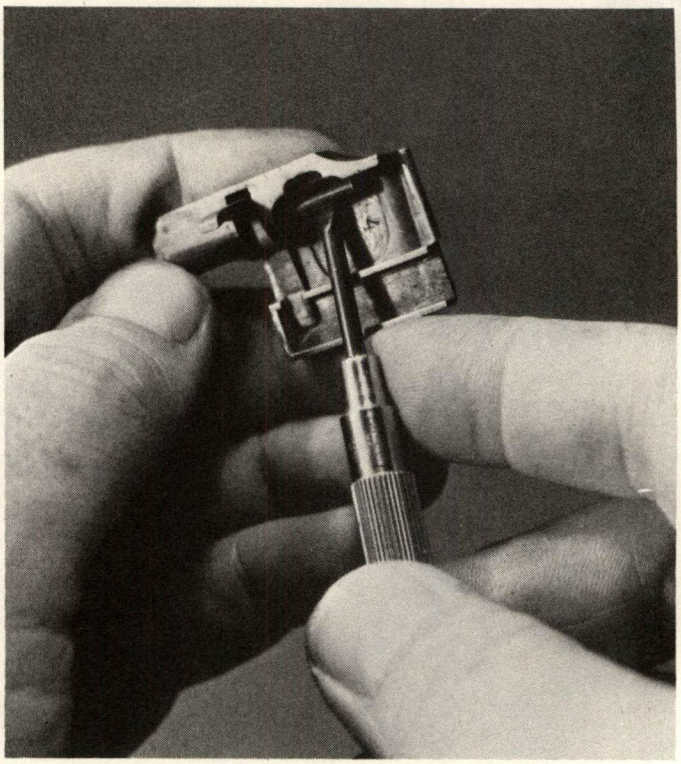
10. With a small screwdriver, lift the hooked end of the sear spring just enough to clear the step on the sear tail, and slide the spring forward to remove it.



11. Remove the sear assembly from the left side of the barrel extension. Drifting out the small pin (arrow) near the front of the sear will release the disconnector plunger and its spring for removal.



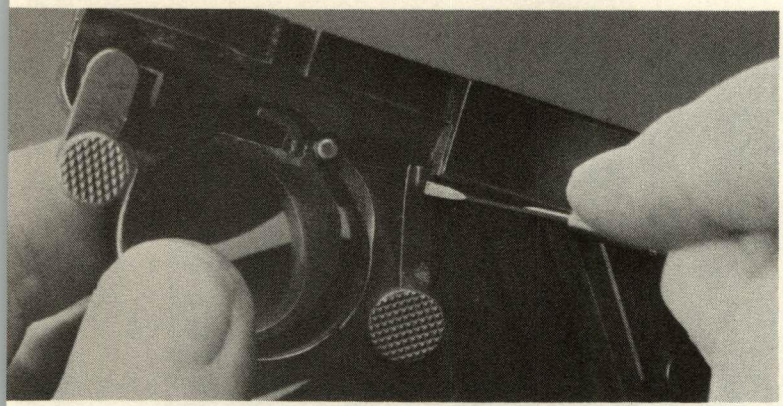




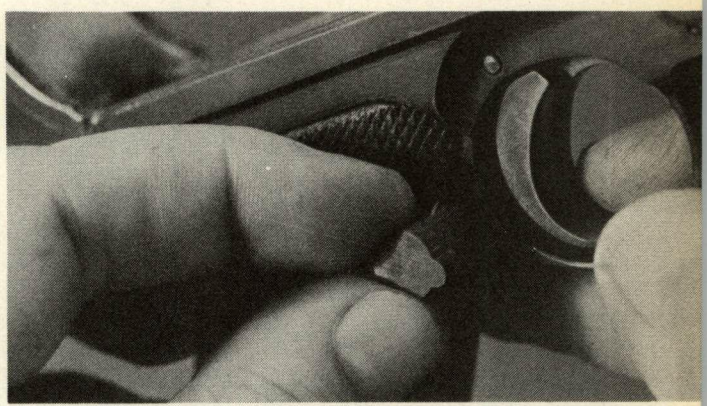
12. With a small screwdriver, gently lift the rear tip of the ejector until its retaining plug is free of its recess in the barrel extension, and remove it. **Caution:** *More of these are broken by careless disassembly than in use. Lift it* ***only*** *far enough to free it.*

13. To remove the trigger lever from the sideplate, use a small screwdriver to pry its pivot tail away from the wall of the sideplate, then move the pivot out toward the rear of the plate.

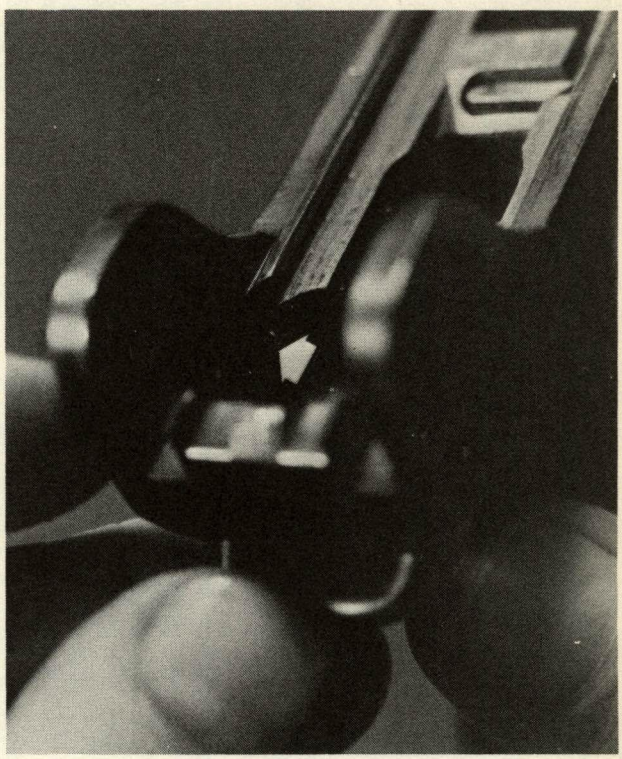
14. Use a small screwdriver to slightly depress the upper end of the magazine catch spring, and push the spring forward from beneath its shelf in the frame. Removal of the spring will free the magazine catch.



15. Remove the magazine catch from the right side of the frame. The takedown-lever can be pushed from the right side of the frame and removed toward the left. The tip of its retaining and positioning spring can be drifted inward from the front underside of the frame for removal.

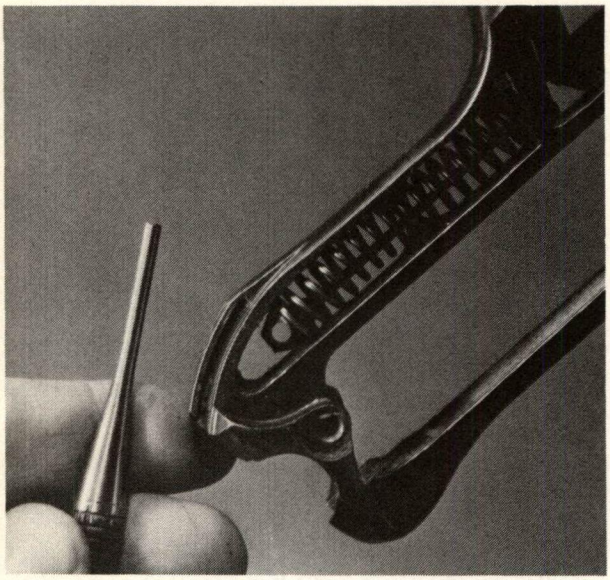


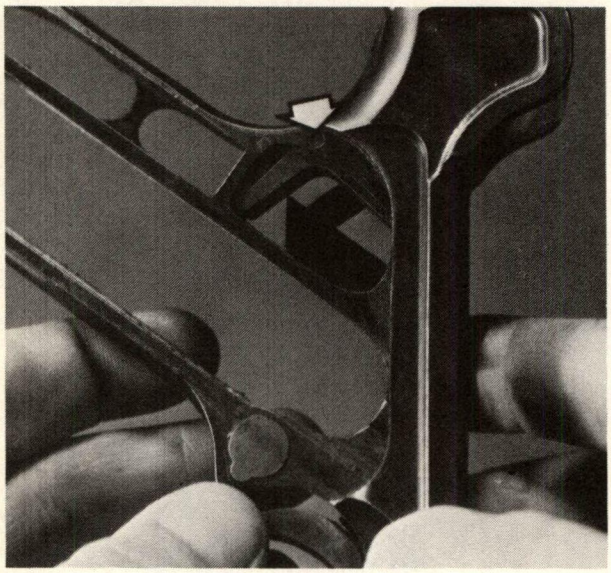
16. The trigger may easily be moved to the left and taken out of the frame, along with its attached spring. To remove the hold-open device and its spring, push it upward from within the frame only enough to clear its rear edge, and pull it straight toward the rear for removal. Do **not** pull it upward, or the spring will be broken.



17. Driving out a small pin located inside the left rear of the frame will free the safety-lever and safety bar for removal.

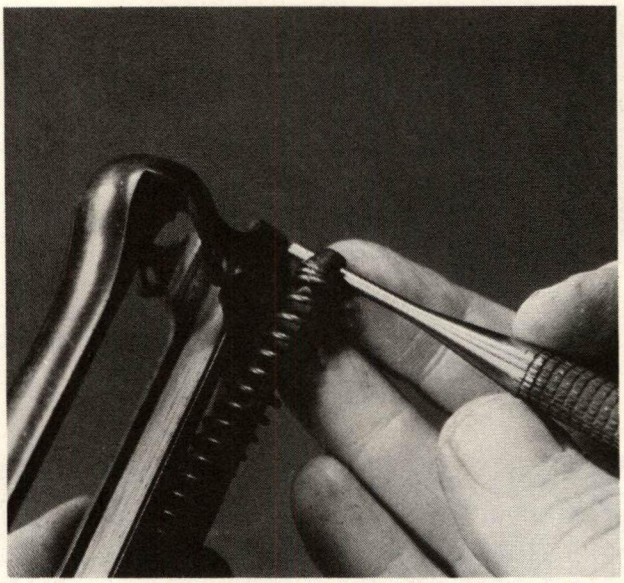
18. Insert a drift of the proper size into the hole in the lower end of the recoil spring guide, working from the right side of the frame.





20. Driving out the cross-pin at the upper rear of the frame will free the recoil lever for removal.

19. Push the recoil spring up (toward the top of the frame) to free the lever from the hook on the spring guide, then ease the spring and guide out toward the right for removal. **Caution:** *The recoil spring is under some compression, even at rest, so take care that it doesn't get away.*



Reassembly Tips:

When sliding the barrel and bolt assembly back onto the frame, be sure the coupling link (the S-shaped piece at lower rear of the bolt assembly) falls in front of the upper arm of the recoil lever in the frame.

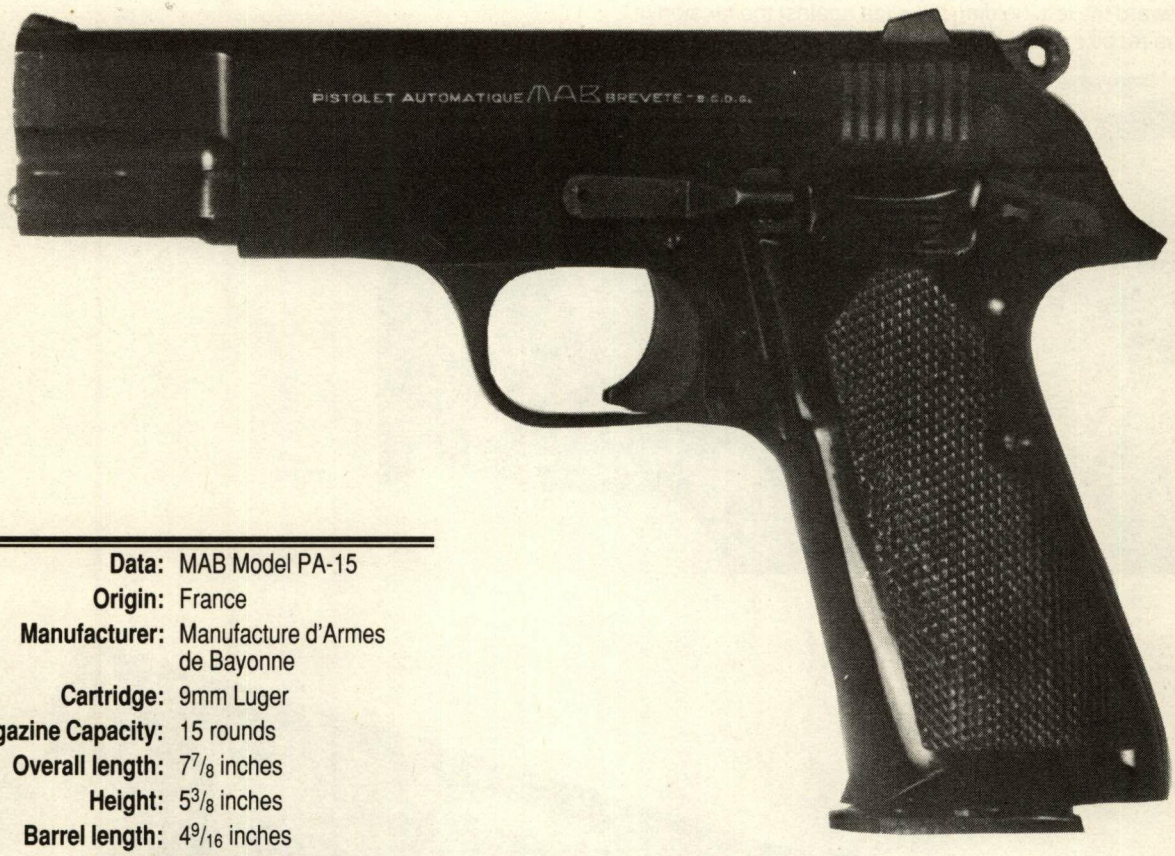
For replacing the ejector, position it in its slot in the barrel extension, and push it straight in until it clicks into place. Use fingers, not tools.

When replacing the safety-lever, exert inward pressure at its pivot point while inserting the retaining pin.

Be sure the trigger lever pivot is all the way forward in the sideplate before trying to turn it back into the locked position.

When sliding the bolt assembly (breechblock and toggle links) back into the barrel extension, press on the sear to allow the striker to remain in the fired position.

MAB Model PA-15



Data:	MAB Model PA-15
Origin:	France
Manufacturer:	Manufacture d'Armes de Bayonne
Cartridge:	9mm Luger
Magazine Capacity:	15 rounds
Overall length:	$7^{7}/_{8}$ inches
Height:	$5^{3}/_{8}$ inches
Barrel length:	$4^{9}/_{16}$ inches
Weight:	39 ounces

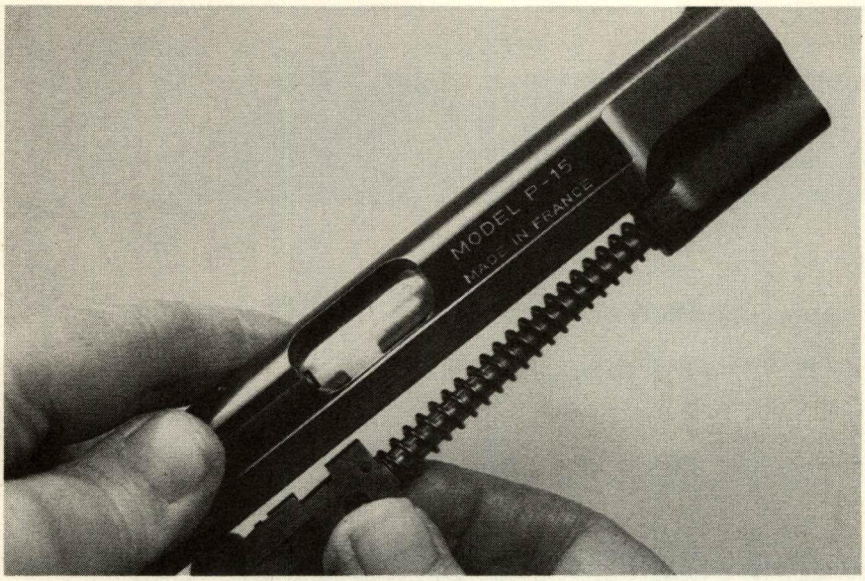
Although the PA-15 has an external appearance similar to conventional Browning-pattern guns, it is totally different inside. It has a single-action trigger system, but uses a top-mounted drawbar like a double action, giving excellent sear leverage and a fine trigger pull. The pistol's locking system is based on the early designs of Georg Roth, Elbert Searle, and Josef Nickl. The barrel turns, and is cammed by an angled track in the slide roof. At one time, the Model PA-15 was imported into the U.S., but at present there is no agent here for the MAB line.

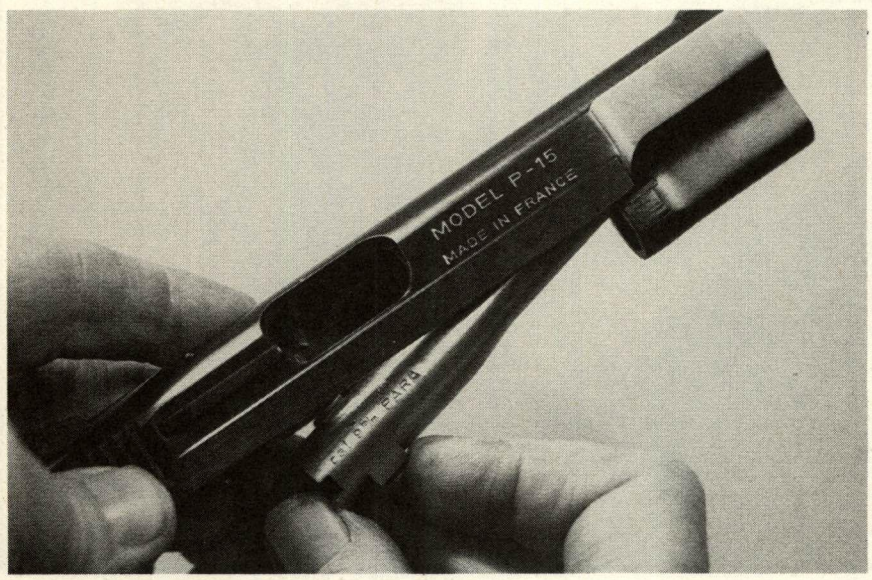
Field Strip:

1. Cock the hammer and remove the magazine. Move the slide to the rear until the semi-circular cut in its left lower edge aligns with the rear inner tip of the slide latch, and push the slide latch out toward the left. The fit of the slide latch tip in the slide cut is very precise, and alignment must be perfect. Remove the slide latch toward the left, holding the slide against the tension of the recoil spring.

2. Run the slide forward off the frame.

3. Disengage the barrel block at the rear of the recoil spring guide from the underlug of the barrel by moving it away from the barrel; remove the block, guide, and recoil spring toward the rear. **Caution:** *Spring is under tension. Remove carefully.*



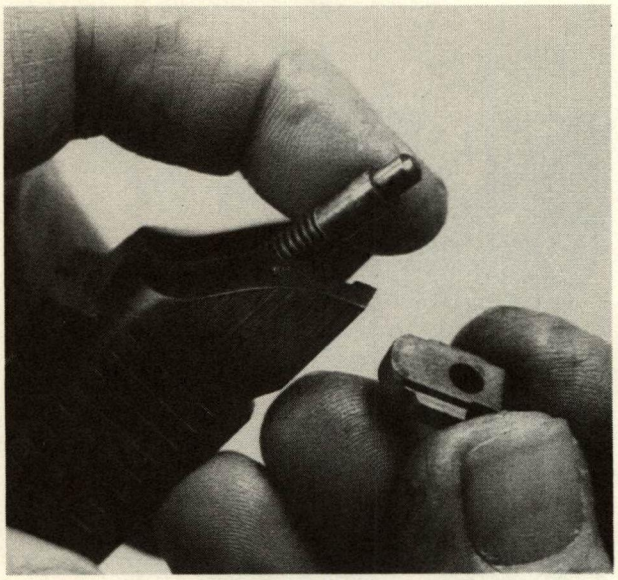


4. Move the barrel forward about $^{3}/_{8}$-inch, then remove it from the underside of the slide. **Gun is now field-stripped.**

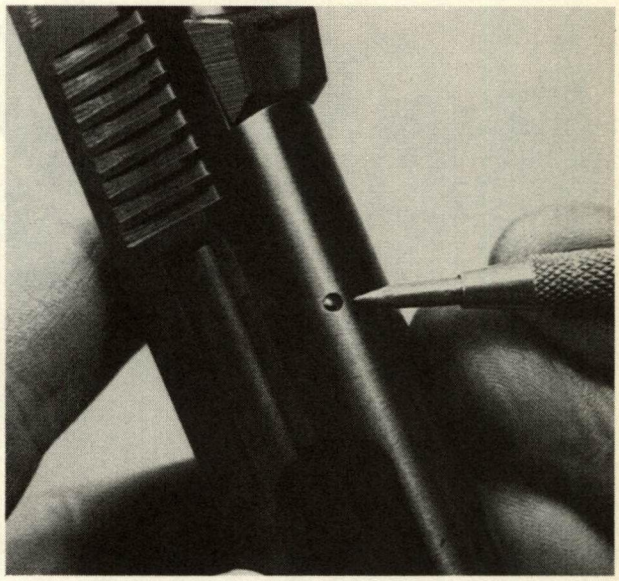
MAB PA-15 field-stripped

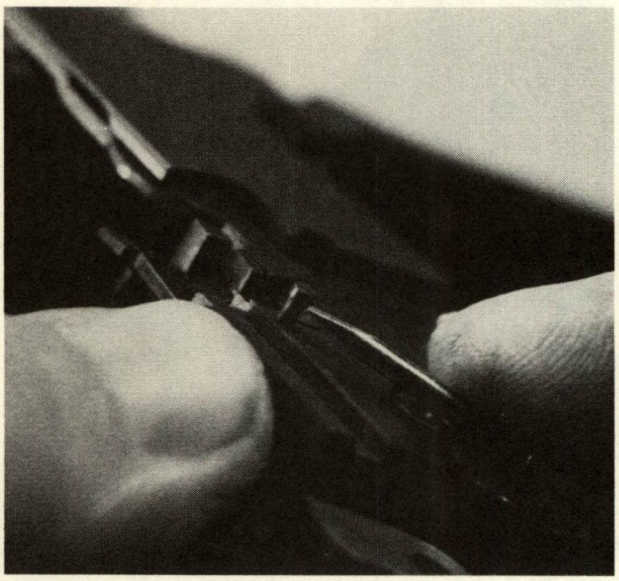
Detail Strip:

5. The firing pin is retained by a vertically-sliding plate at the rear of the slide. Use a drift punch to depress the firing pin beyond the plate, and slide the plate down and out of the slide. **Caution:** *The firing pin spring is under tension. Restrain the pin while removing the plate and ease the pin out.*

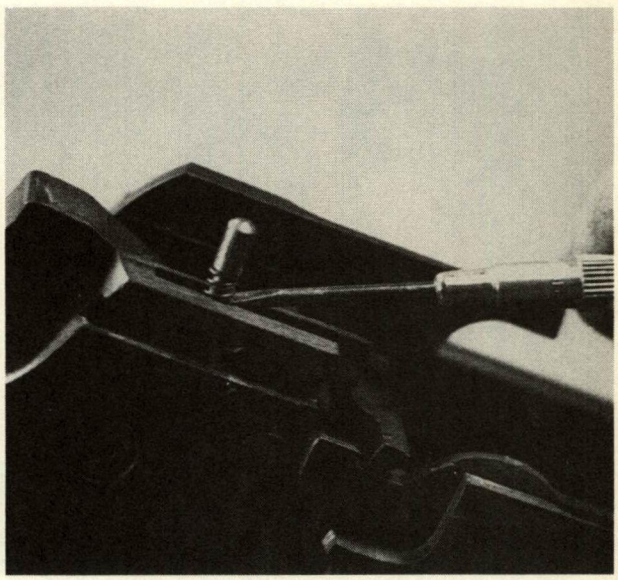


6. The extractor and its spring are retained by a vertical pin in the slide. The pin is driven out downward.



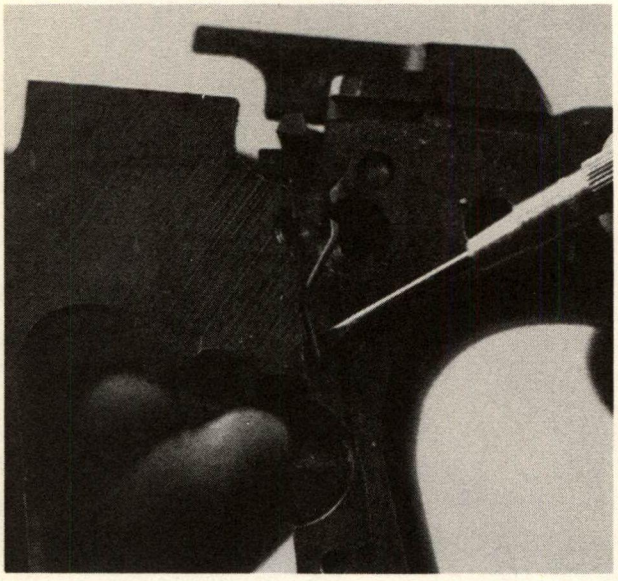


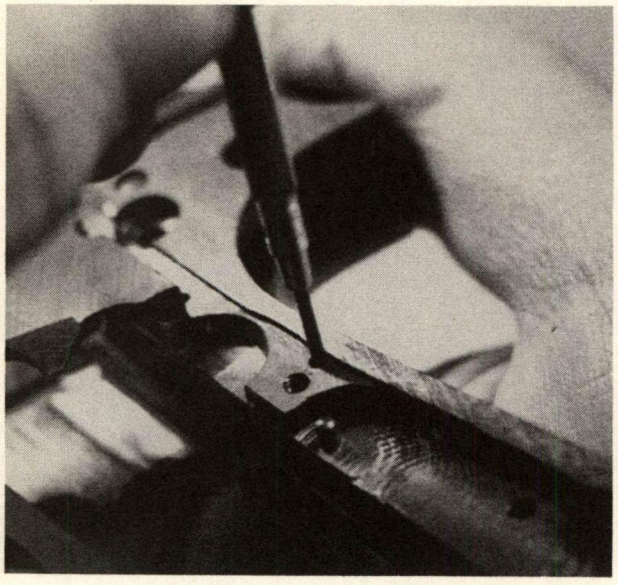
7. The magazine safety is retained by a small cross-pin on the right side of the frame, just above the hammer pivot. The pin protrudes slightly and has an enlarged head which allows it to be easily pried out to the right. Remove the magazine safety from the top of the frame.



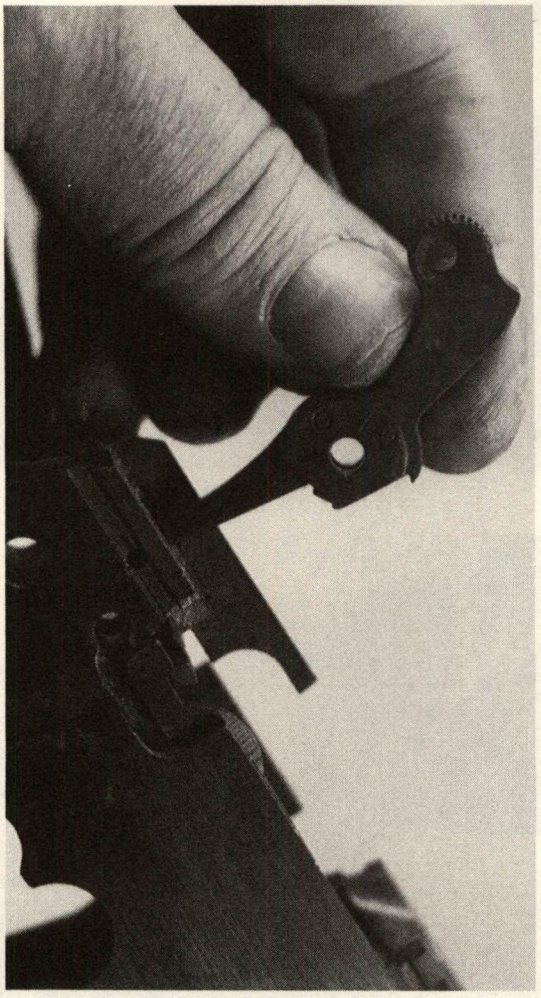
8. Use a small screwdriver to lift the magazine safety plunger and spring from the top of the frame.

9. Turn the safety-lever up to the on-safe position, and remove it toward the left side. Use a small screwdriver to lift the safety spring at its lower end and remove it from its recess in the frame.



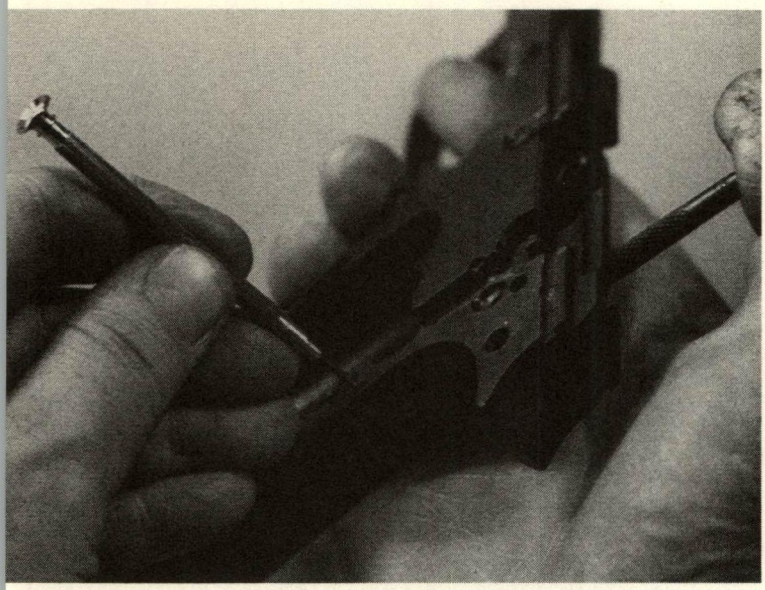


10. Cock the hammer and insert a small tool into the aperture just behind the hole for the left grip screw. Ease the hammer down and the tool will trap the hammer spring plunger, freeing the hammer from tension. **Note:** Be sure the tool is firmly engaged on top of the plunger, because if it should slip out, the compressed spring will be released with considerable force.

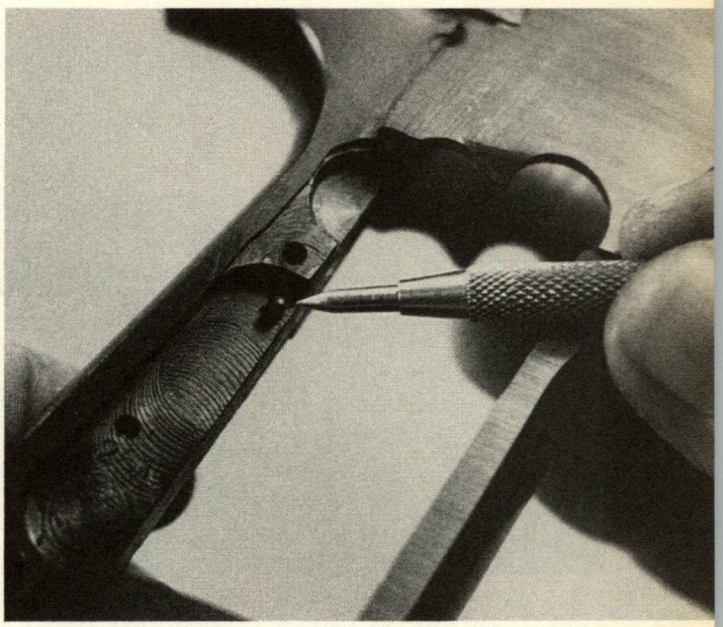


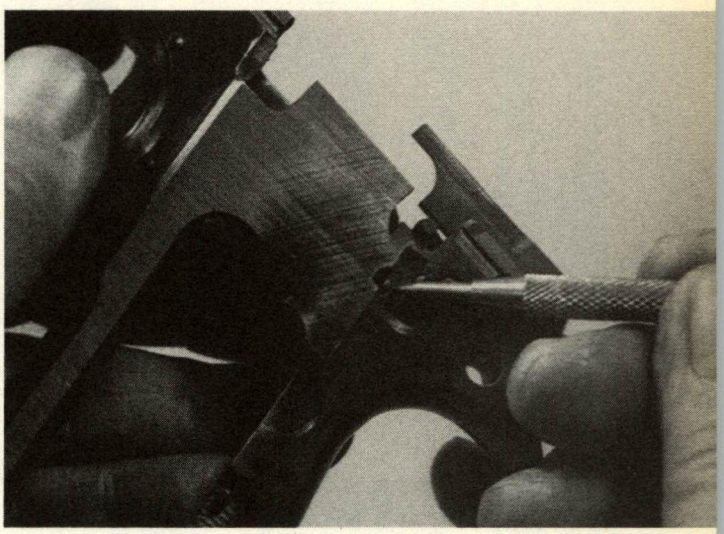
11. Push out the hammer pivot toward the right side and remove the hammer and hammer strut from the top of the frame. The hammer and strut may be separated by drifting out the small pin at the lower rear of the hammer, if necessary.

12. Insert a punch into the top of the frame to bear on the hammer spring plunger and depress it slightly, holding the tool firmly to control the tension of the spring. Remove the other tool from the small aperture on the left side, and ease out the plunger and spring. This is a strong spring, so be careful.



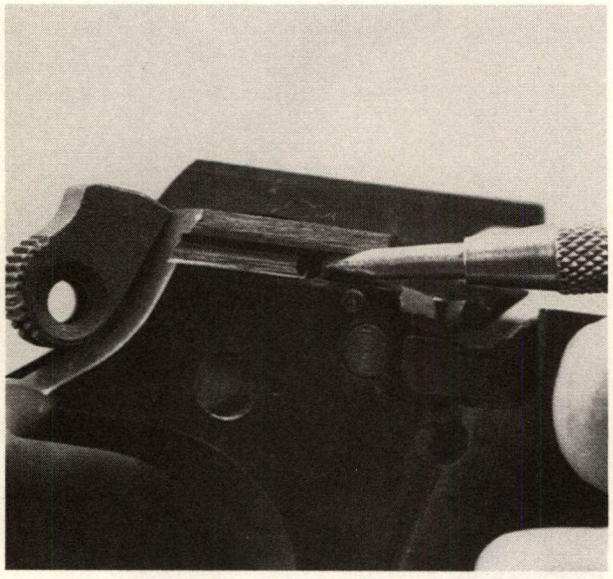
13. The flat sear spring is retained by a cross-pin in the backstrap of the grip frame, just below the grip screw ledge.



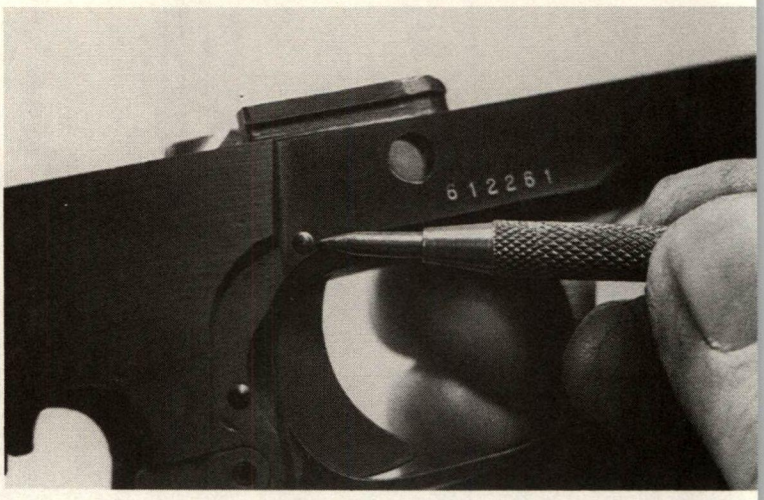


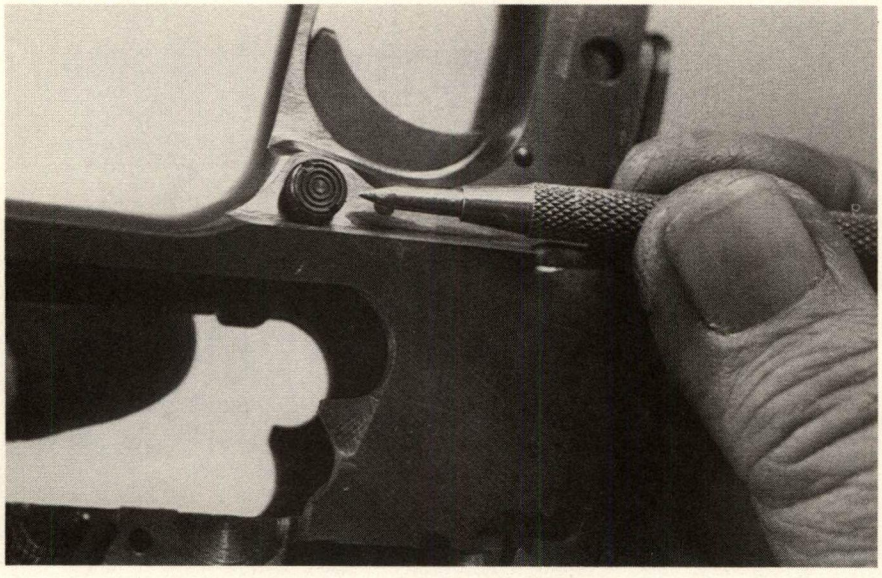
14. The sear pin must be drifted out toward the right, and the sear is removed forward into the magazine well.

15. After the hammer and magazine safety are removed, the small hole just above the magazine safety pin will allow access to the short cross-pin which retains the ejector on the left side of the frame. This pin must be drifted out toward the left side, and the ejector is removed from the top of the frame. In this photo, the hammer and magazine safety are still in place.



16. The trigger is retained by a cross-pin, and the trigger and trigger bar are removed toward the rear, then up and out of the frame. The cross-pin behind the trigger, just above the magazine catch, is a limit pin for the trigger and is not removed in normal takedown. Before removing the trigger and separating the trigger bar and spring from it, note the relationship of these parts to assist reassembly. The right arm of the spring goes under the trigger bar, while the longer left arm extends down into a recess in the frame.

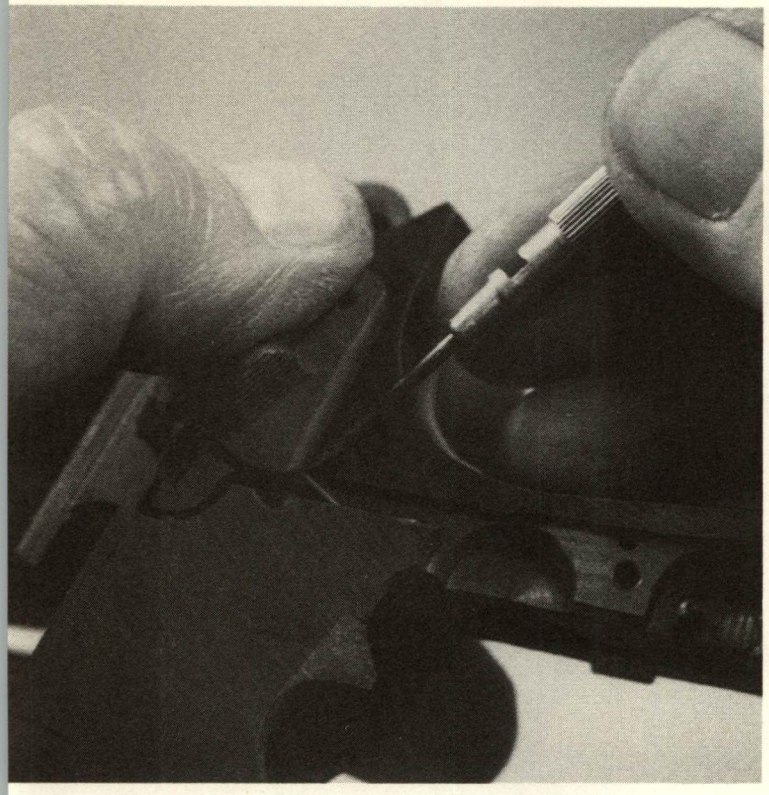




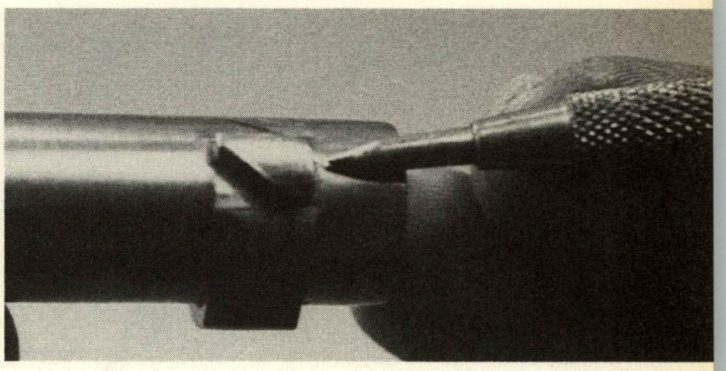
17. Removal of the magazine release requires a two-pronged tool, easily made by cutting into the tip of an inexpensive screwdriver. Removal may require some force, as the tip of the release button on the right side is usually spread into a coned area on the catch block. The button and spring are removed toward the left, the catch block toward the right.

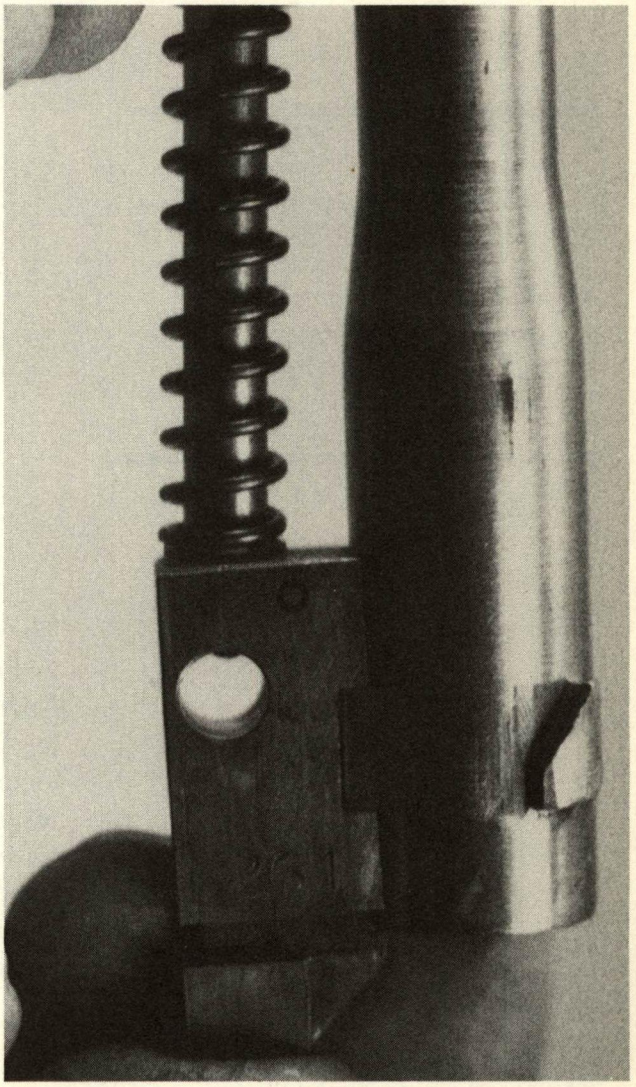
Reassembly Tips:

1. When replacing the safety-lever, use a small tool to flex the safety spring slightly forward as the lever is pushed into place.



2. Note that the angled lug on the barrel fits into the track in the inside top of the slide, while the larger rectangular lug goes toward the underside.





3. This photo shows the proper engagement of the barrel and the recoil spring unit when the parts are assembled in the slide. The barrel block and spring guide can be separated by drifting out the small cross-pin, and this will free the internal spring and plunger that powers the slide latch, but this is seldom necessary in normal takedown.

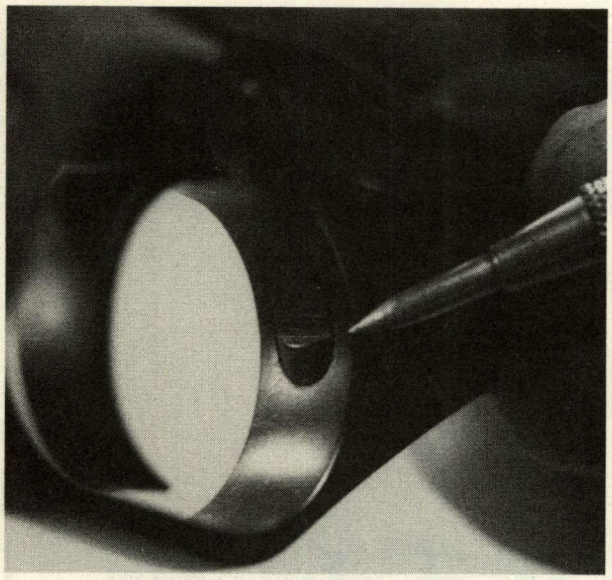
Mauser HSc

Data:	Mauser Model HSc
Origin:	West Germany
Manufacturer:	Mauser Werke Gmbh, Oberndorf
Cartridge:	9mm Kurz (380 ACP)
Magazine capacity:	7 rounds
Overall length:	$6\frac{1}{4}$ inches
Height:	$4\frac{5}{8}$ inches
Barrel length:	$3\frac{3}{8}$ inches
Weight:	23 ounces

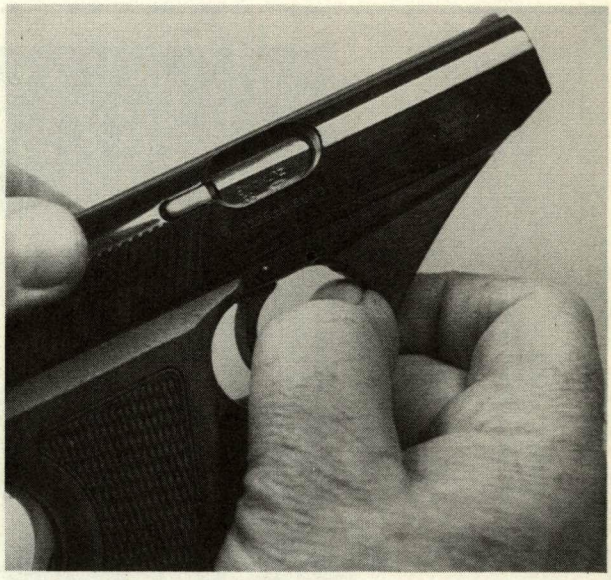
The original Model HSc was produced from 1941 to 1945, and nearly all of the pistols of that time were made for the Nazi military and police. Many of these were brought into the U.S. during and after World War II by returning servicemen. Several years after the war, the Mauser Werke resumed production of the HSc for commercial sale. The postwar pistols were slightly redesigned, the main difference being a separate backstrap on the grip frame to simplify manufacturing. The pistol covered here is the newer postwar model.

Field Strip:

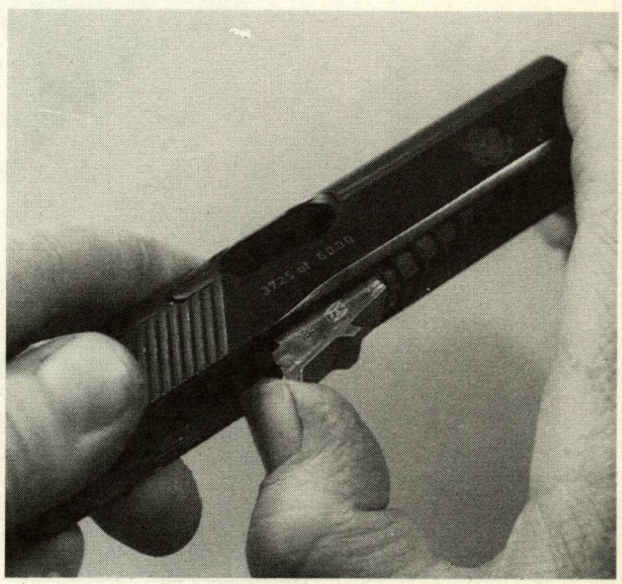
1. The takedown latch is located inside the front section of the trigger guard, and is pushed downward to release.



2. With hammer cocked, magazine removed, and safety-lever in the on-safe position, use a thumbnail to operate the takedown latch, and move the slide assembly forward about 1/4-inch.



3. Lift the slide assembly from the top of the frame.

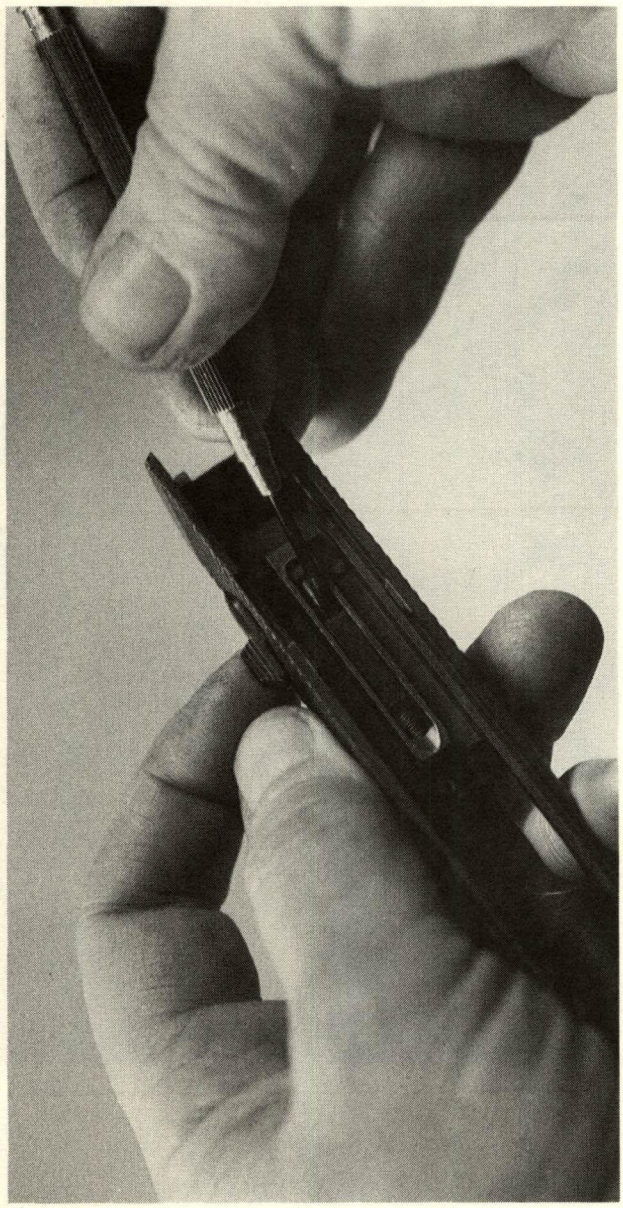


4. Push the barrel forward to clear the extractor, lift it at the rear, and remove it from the bottom of the slide. **Caution:** *Recoil spring is under tension.* **Gun is now field-stripped.**

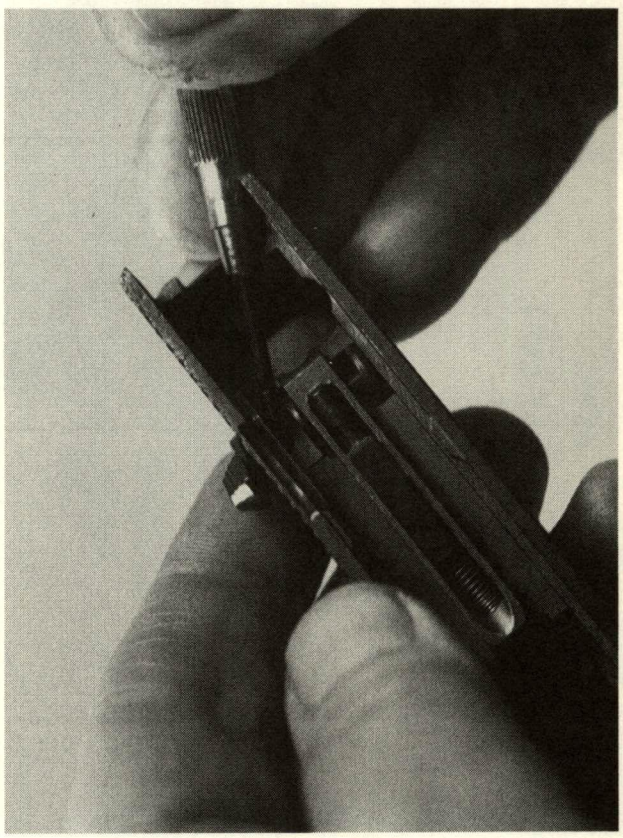
Mauser HSc field-stripped

Detail Strip:

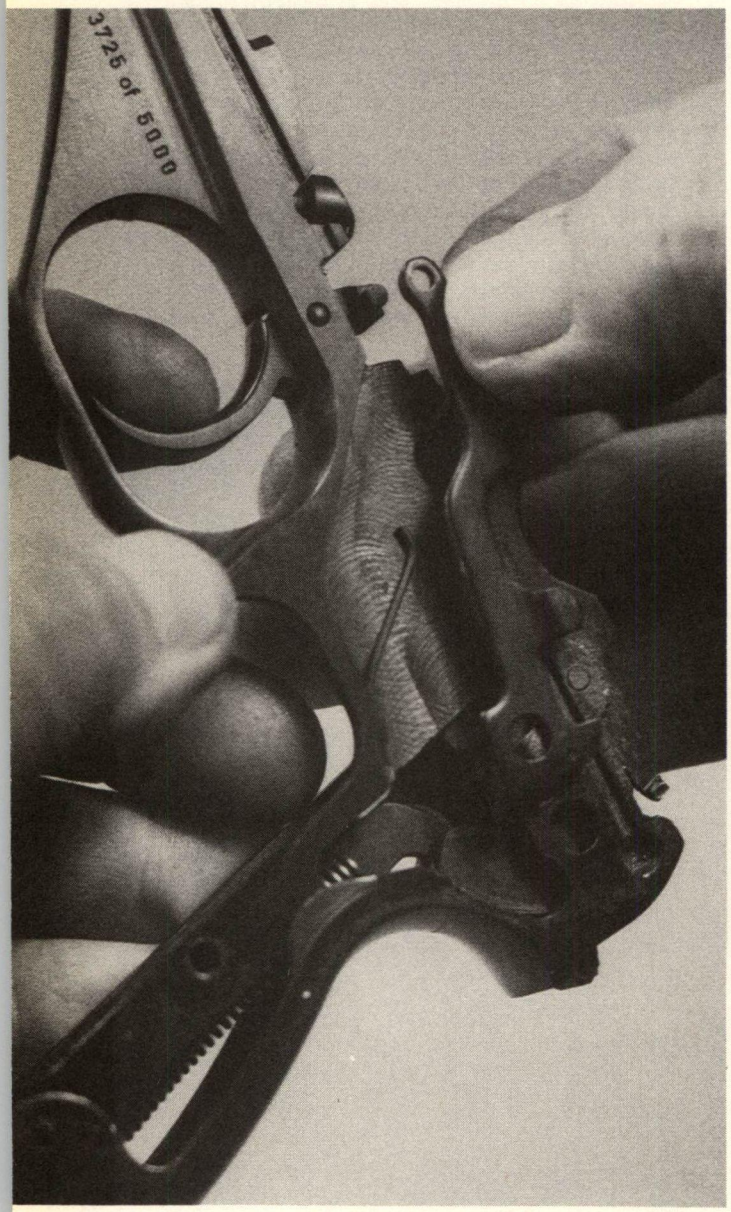
5. Use a small screwdriver to push against the rear shoulder of the firing pin body, and move it forward to clear the safety. While holding it there, turn the safety down to the on-safe position, and lift the firing pin, propping its round head against the rear inside edge of the firing pin recess in the slide.



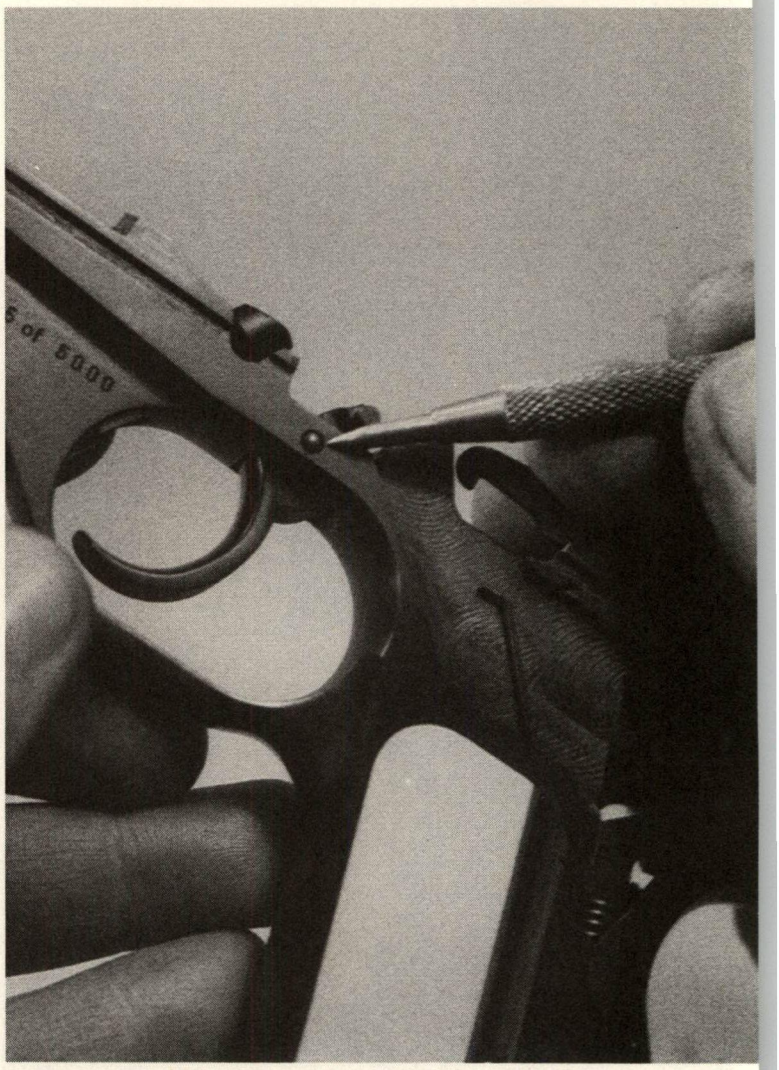
6. With the firing pin propped out of the way, use the screwdriver to nudge the safety toward the left, and remove it from the left side of the slide. Then, push the firing pin back down and forward, and allow its spring to push it toward the rear. Lift the front of the firing pin from its recess, and remove the firing pin and its spring up and forward from the bottom of the slide. The safety spring and its plunger are relieved of tension by removal of the safety, and the extractor can now be removed from the right side of the slide. The spring and plungers which power the extractor and safety can now be taken out forward from the extractor recess in the slide.



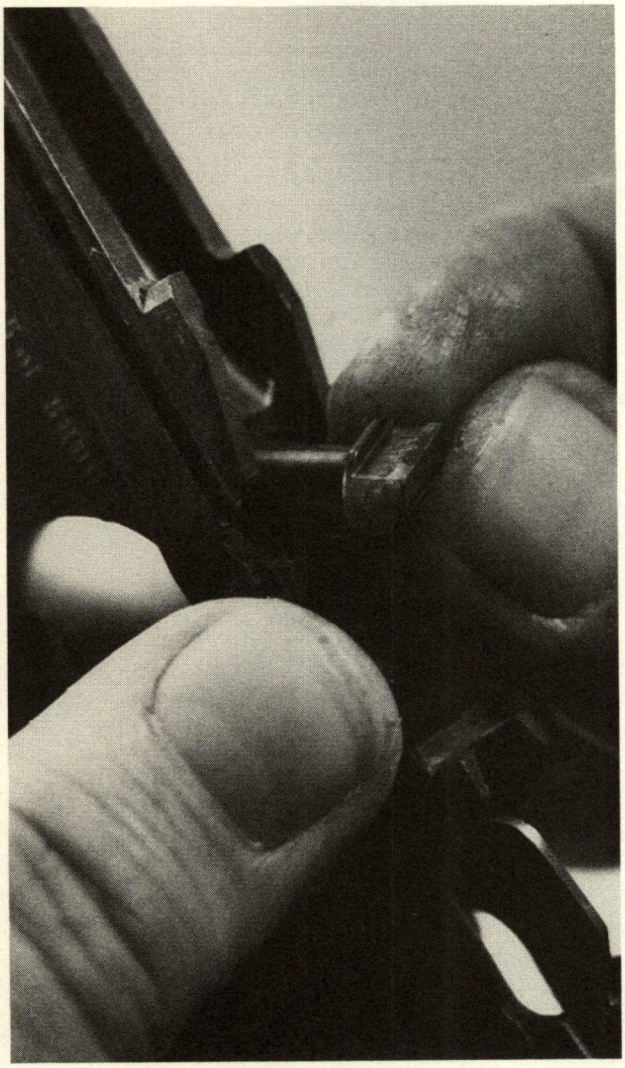
7. After the grips are removed, the trigger bar is lifted off the left side of the frame, disengaging its lower edge from the trigger bar spring.



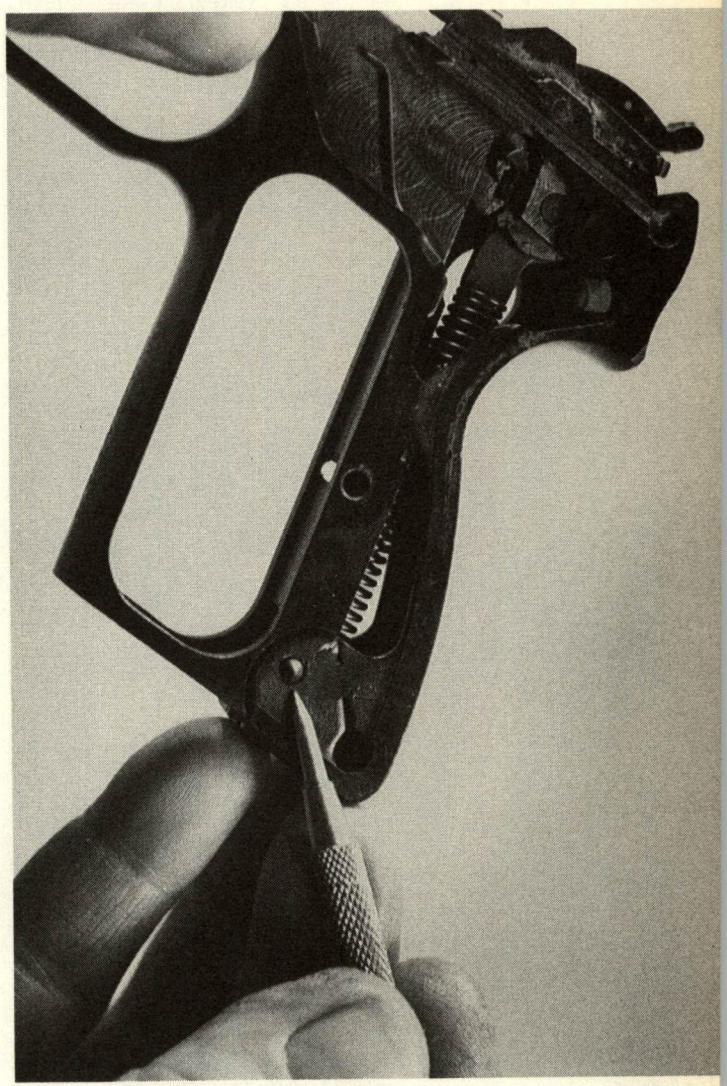
8. The trigger and its spring are retained by a cross-pin, and drifting this out will release the trigger for removal from the top of the frame. **Caution:** *The trigger spring is under tension. Restrain it when removing the tool that drives out the pin.*



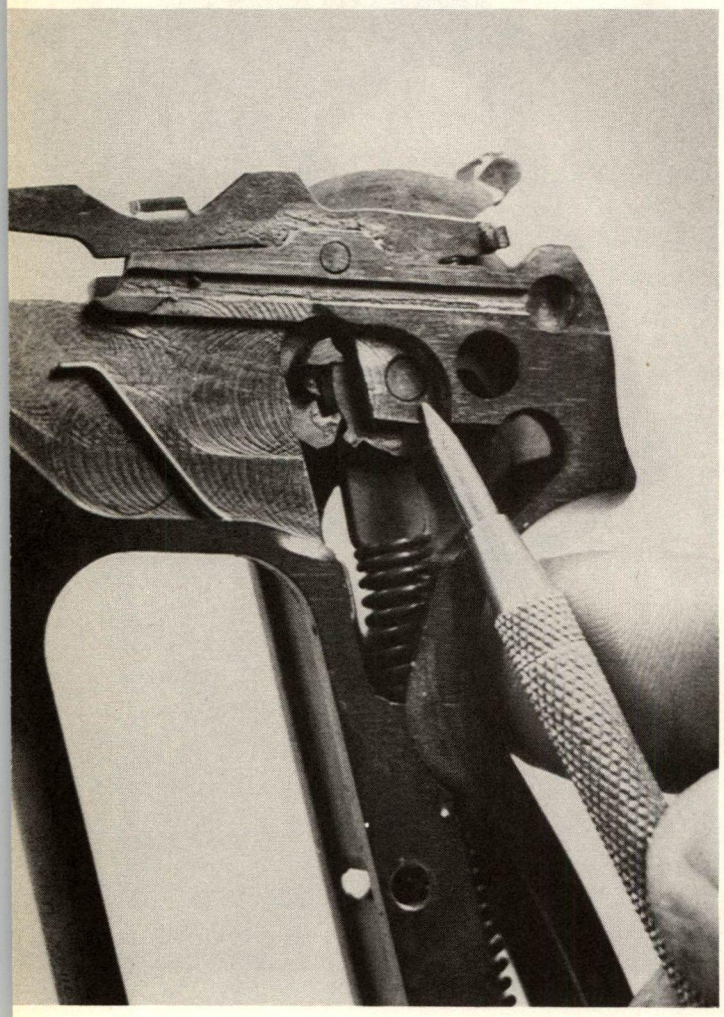
9. To remove the takedown-latch, place a screwdriver of the proper size in the slot on its top, depress the latch as far as it will go, and give it a half turn to free its retaining flange from its shelf in the frame. The latch and its spring can now be removed upward.



10. The pin with coned ends at the lower rear of the grip frame serves several purposes. It stabilizes the grips against rotation, and also retains the backstrap, the magazine catch, and its spring, which is also the hammer spring. Before removing this pin, be sure the hammer is completely lowered by pushing forward on the sear arm (visible in the upper lobe of the frame cut) and easing the hammer all the way down. This will relieve tension on the hammer spring.



11. After the backstrap, magazine catch, hammer spring and strut are removed (they are still in place in this photo), the hammer pivot is pushed out from left to right, and the hammer removed from the top of the frame. The smaller cross-pin at the top of the frame retains the combination part which is the hold-open device, ejector, and magazine safety, as well as the sear and cartridge guide. The sear spring is mounted inside the sear, and bears on the underside of the cartridge guide. Restrain this spring when the pin is removed. The spring which powers the ejector/hold-open/magazine safety is very small, and is mounted in the top of the left frame wall, near the rear. Take care that it doesn't escape and become lost. The trigger bar spring is staked in place on the frame, and removal is not advisable except for replacement.



Reassembly Tips:

When replacing the trigger bar/disconnector on the left side of the frame, be sure the hammer is lowered, and depress the trigger bar spring slightly to engage it with its groove in the lower edge of the bar.

When replacing the hammer strut and spring, and the magazine catch and backstrap, be sure the hammer is fully lowered, in fired position, to prevent tension on the spring that would make insertion of the pin difficult.

When replacing the sear, sear spring, and cartridge guide in the frame, the use of a slave pin will make installation easier, but it is not absolutely necessary.

When replacing the safety, use a small screwdriver to depress the plunger and spring inside the right wall of the slide while the safety is moved inward.

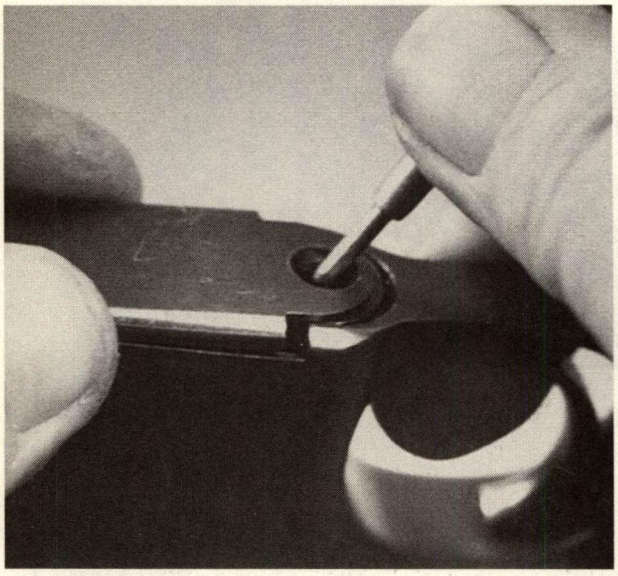
Mauser 1896

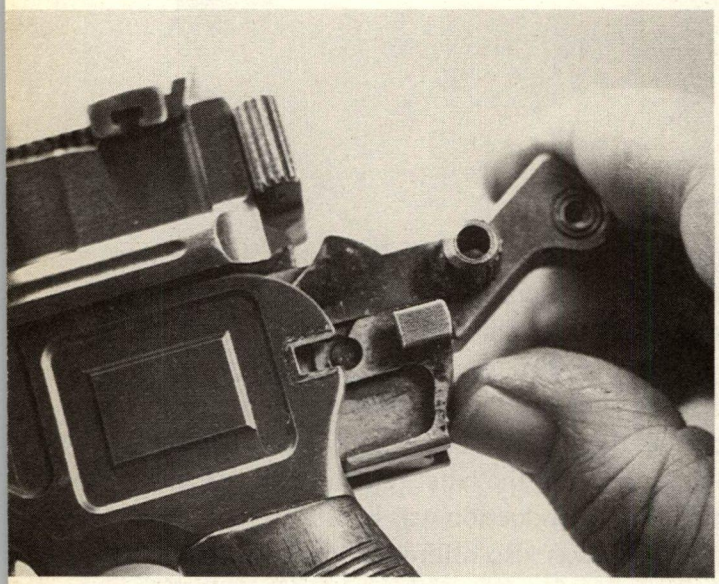
Data:	Mauser 1896
Origin:	Germany
Manufacturer:	Waffenfabrik Mauser, Oberndorf
Cartridge:	7.63mm Mauser (30 Mauser), 9mm Luger
Magazine capacity:	10 rounds
Overall length:	$11\frac{9}{16}$ inches
Height:	$6\frac{1}{8}$ inches
Barrel length:	$5\frac{1}{2}$ inches
Weight:	39 ounces

The famous "Broomhandle" had the official factory designation C96, the C representing Construction, to separate it from the military guns, which all bore the prefix "Modell." Although the C96 was never officially adopted by the German military, many of the guns saw service in several wars. Mechanically, the pistol is remarkable in having no pins and only one screw, the latter retaining the grips. The major portion of the production was in the 7.63mm chambering, but the gun was also offered in 9mm Luger, and a very few were made for a special round called the 9mm Mauser Export.

Field Strip:

1. With a tool of bronze or some other non-marring material, depress the magazine floorplate latch and slide the floorplate forward until it can be lifted off. The magazine spring and follower will come out as well as the three parts are interlocked.

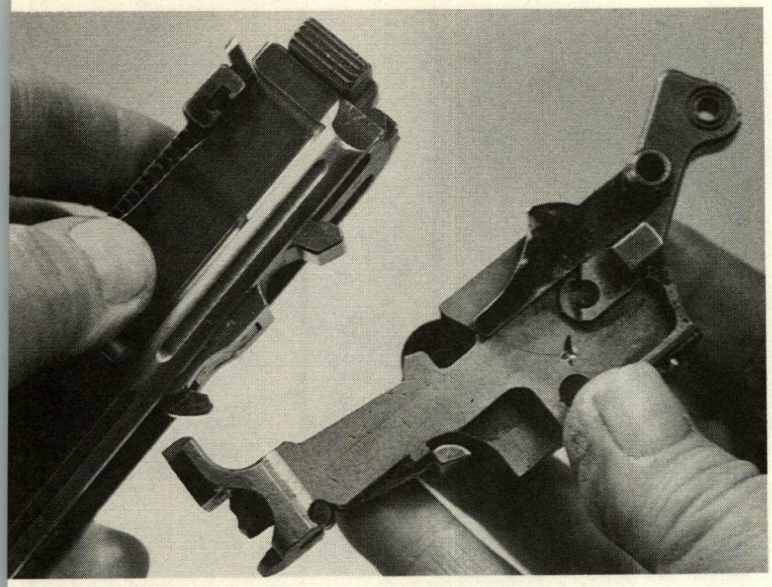




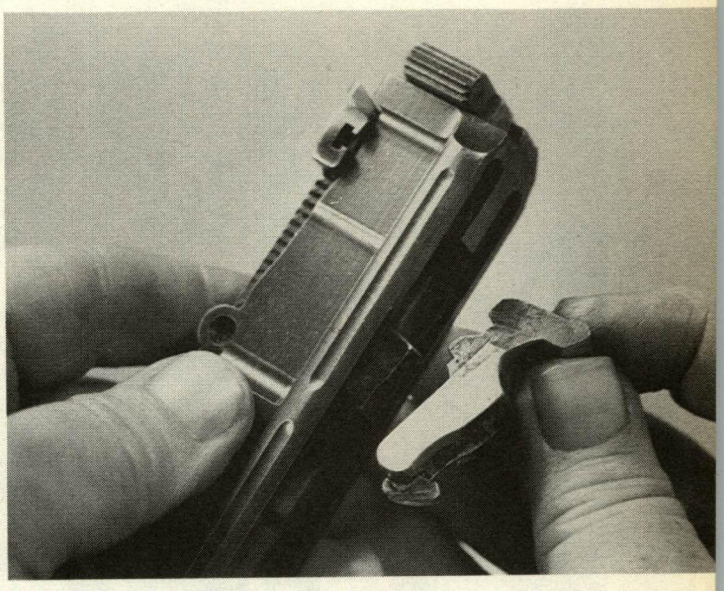
2. The takedown-latch is located at the rear of the frame, just below the hammer channel. Cock the hammer.

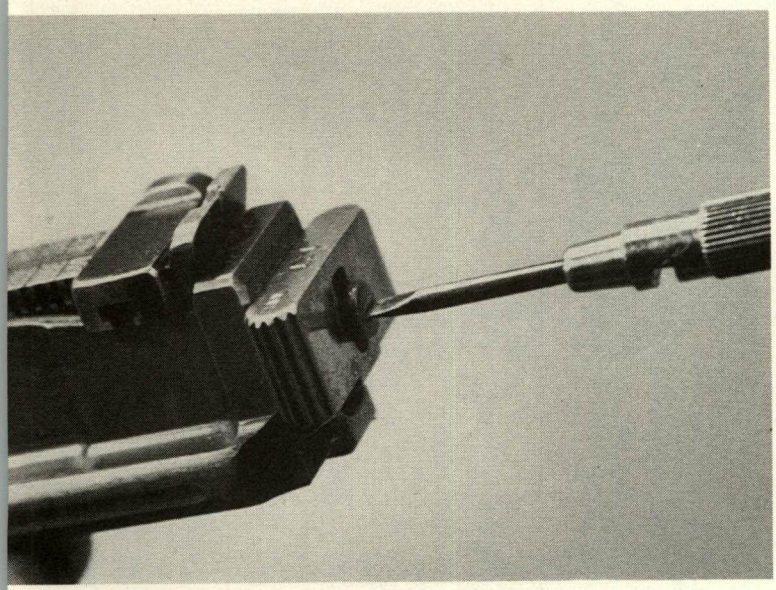
3. Use a thumbnail or some other non-marring tool to push the latch up, and while holding it there run the barrel assembly and sub-frame toward the rear and out of the grip frame.

4. Detach the sub-frame from the barrel and bolt assembly.

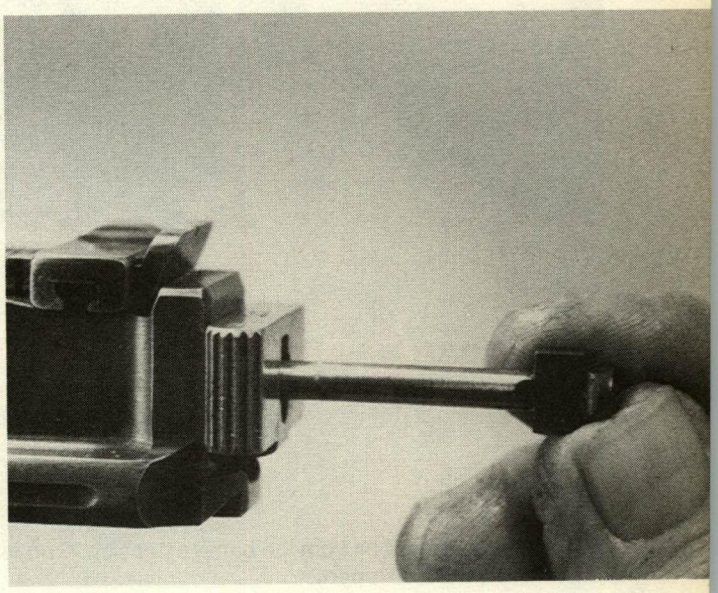


5. Remove the locking block from the underside of the barrel and bolt assembly.



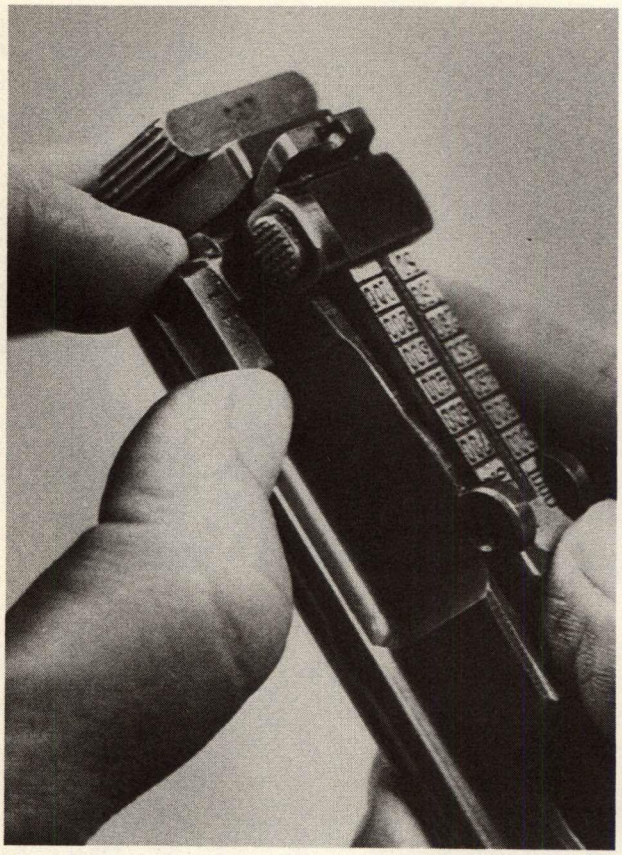


6. With a screwdriver of the proper size, push in the head of the firing pin and give it a quarter-turn to the right, then allow it to spring out.

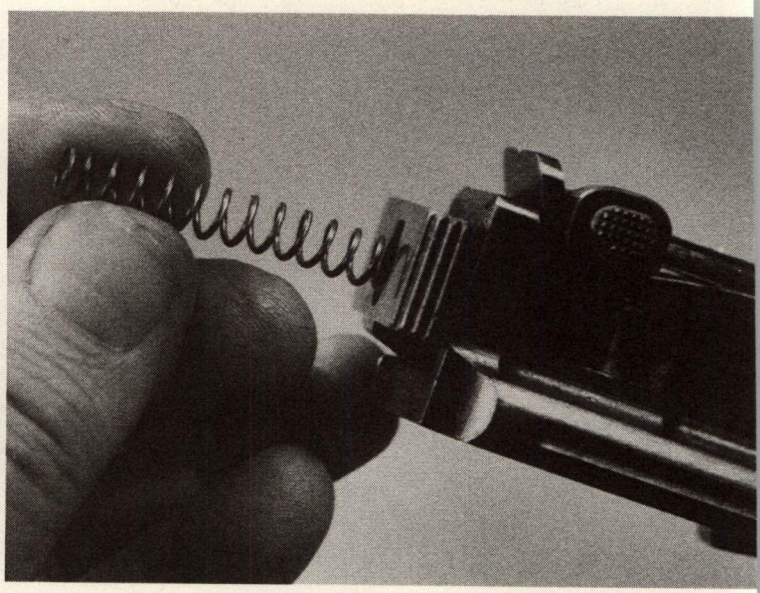


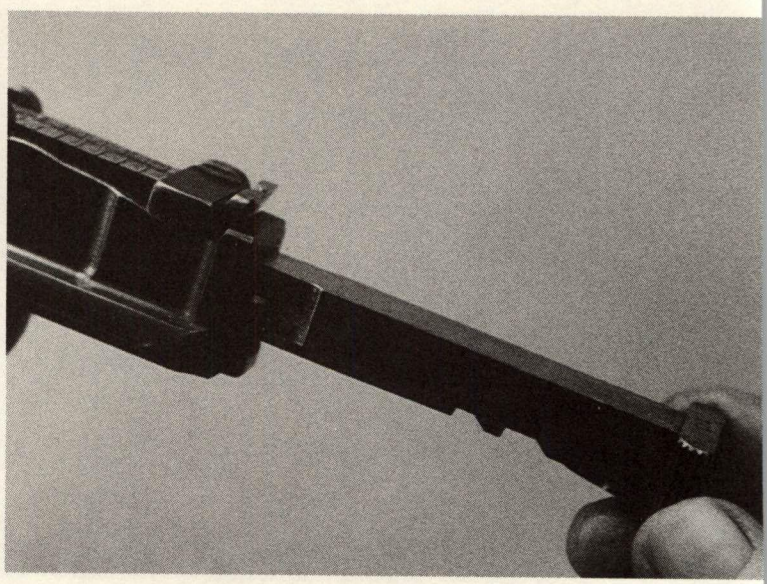
7. Remove the firing pin from the bolt. In most cases, the firing pin spring will also come out, attached to the front of the pin.

8. Push the bolt retainer forward, then withdraw it from the right side.

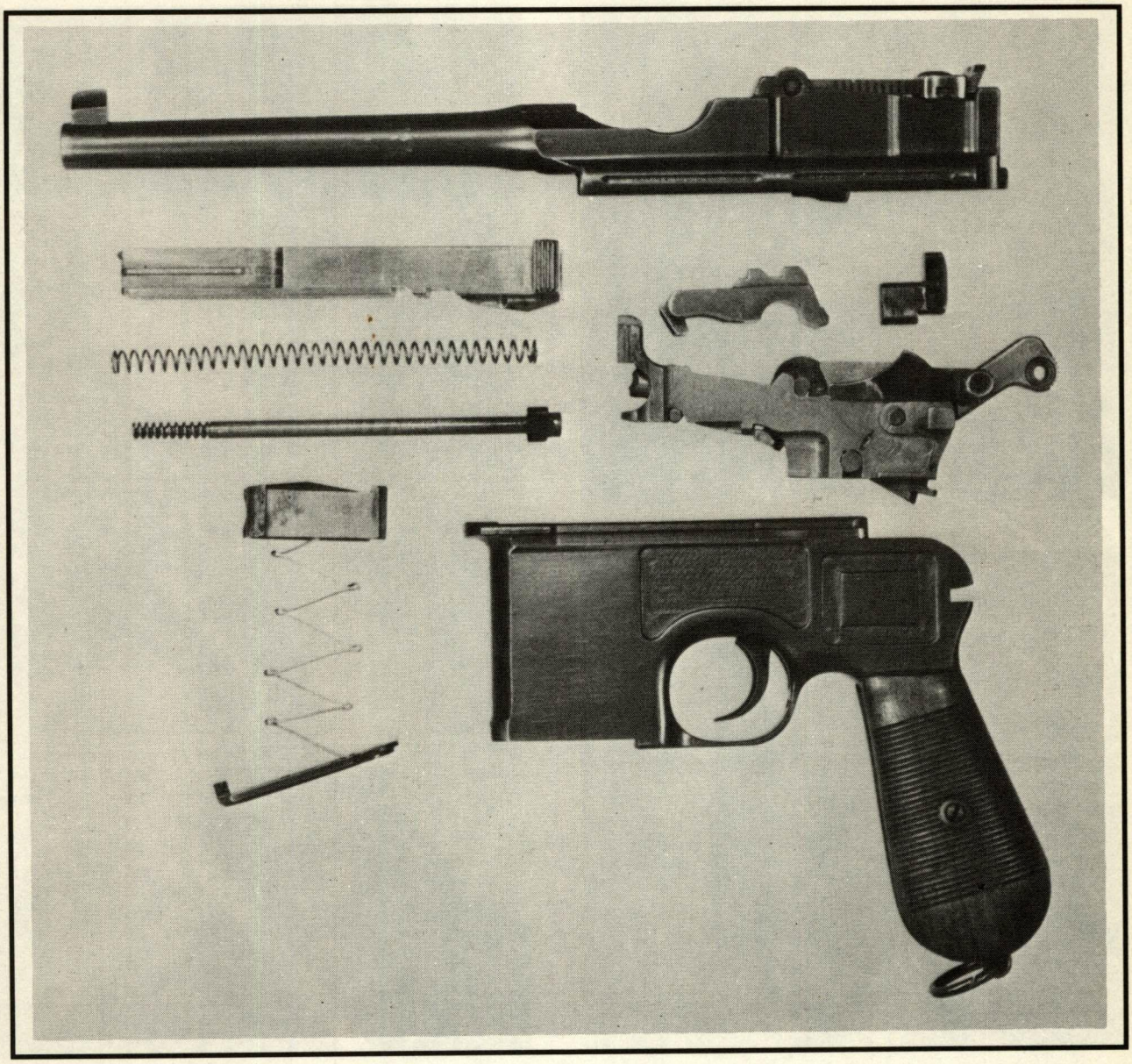


9. Remove the recoil spring from its tunnel in the bolt.





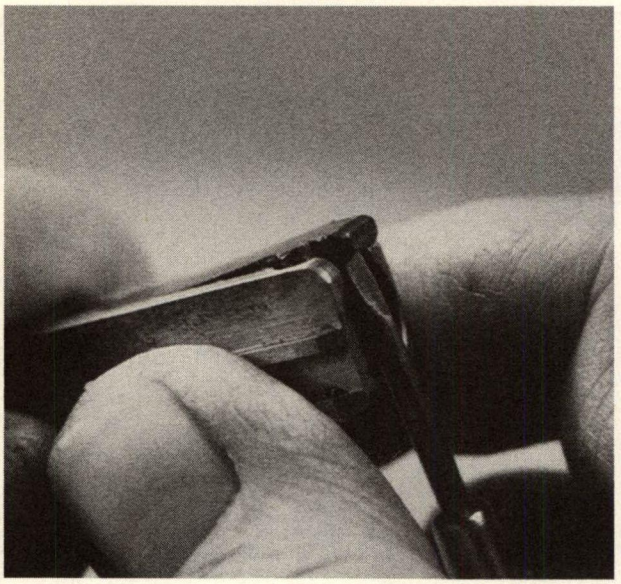
10. Remove the bolt from the barrel extension. **Gun is now field-stripped.**

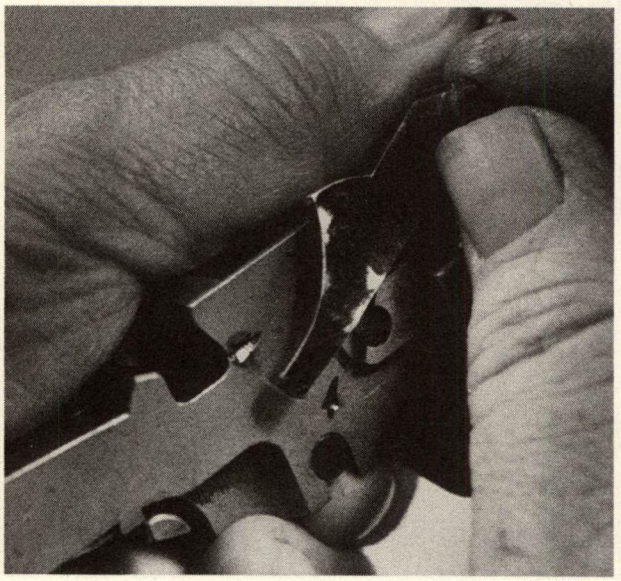


Mauser 1896 field-stripped

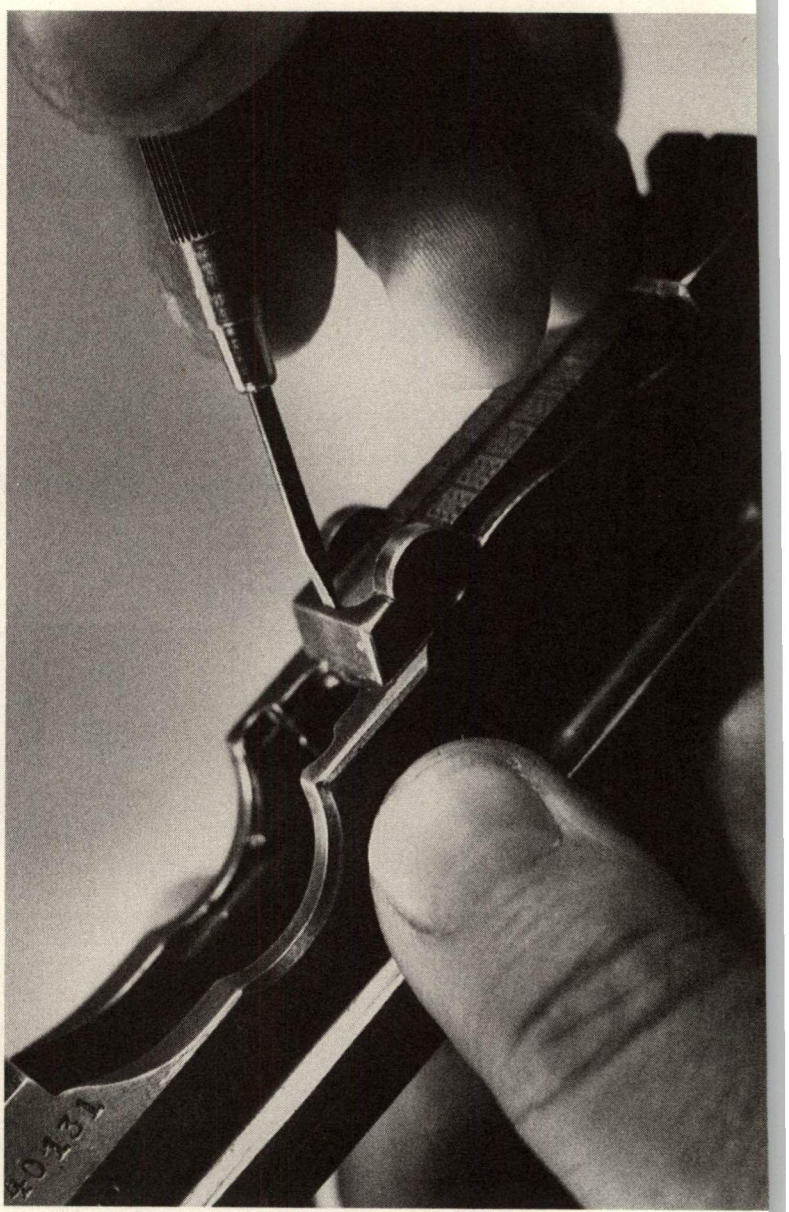
Detail Strip:

11. Insert a screwdriver under the beak of the extractor and lift it just enough for its retaining wings to clear their recesses in the top of the bolt, and lever the extractor gently forward out of its recess. **Caution:** *More extractors are broken in disassembly than in firing use. Proceed carefully.*



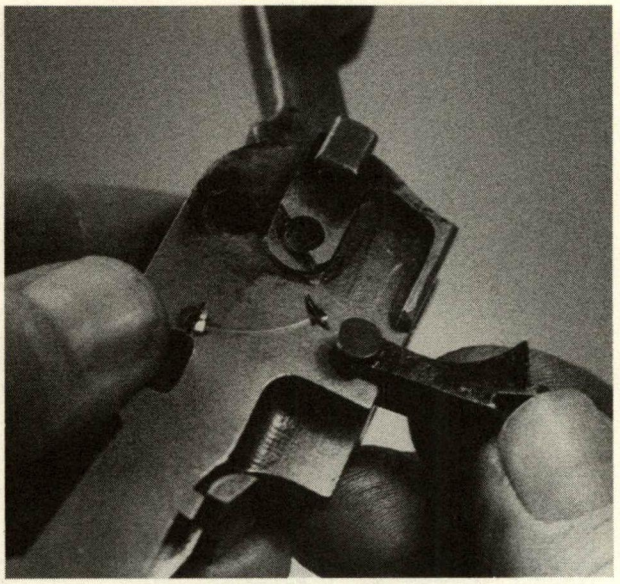


12. Insert a screwdriver at the front of the sight base and lever the sight down and toward the rear for removal. When the sight is off, the adjustment bar and its button and spring are removed forward, and the sight spring can be taken out of the top of the barrel extension.

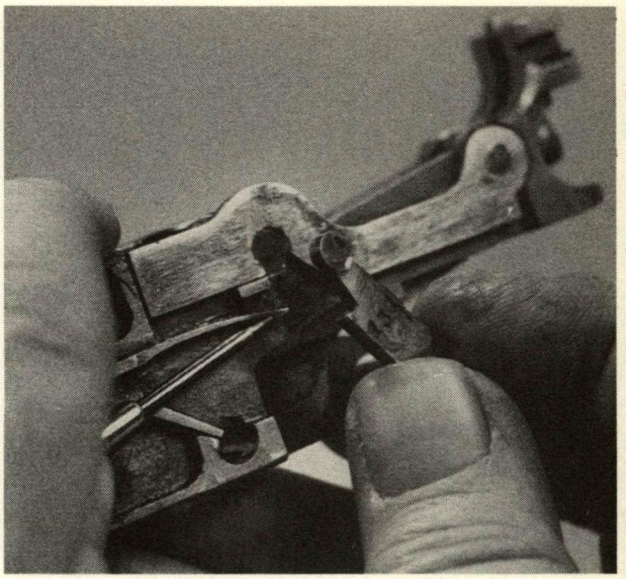


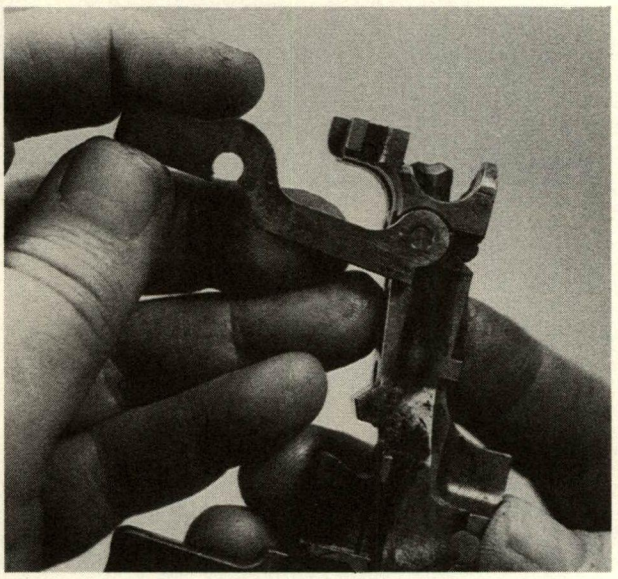
13. Depress the hammer, and turn the safety-lever to a point halfway between its two positions. Lift the safety off toward the left.

14. Remove the takedown-latch toward the left side. Ease the hammer down to fired position.

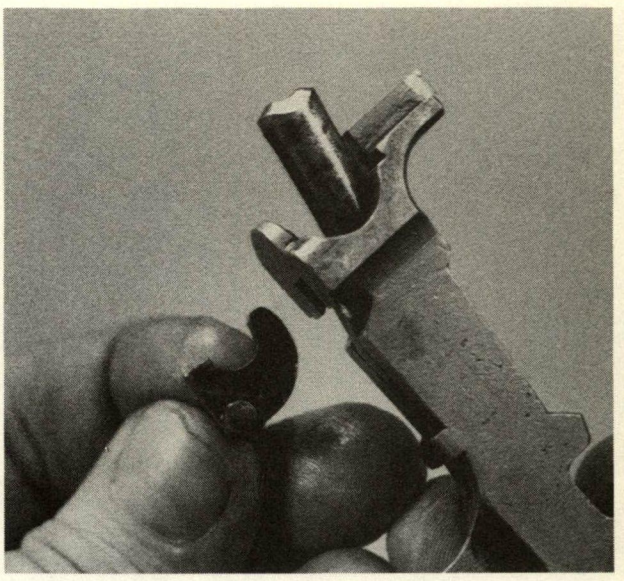


15. Depress the sear lever spring, and lift the sear lever off toward the right.



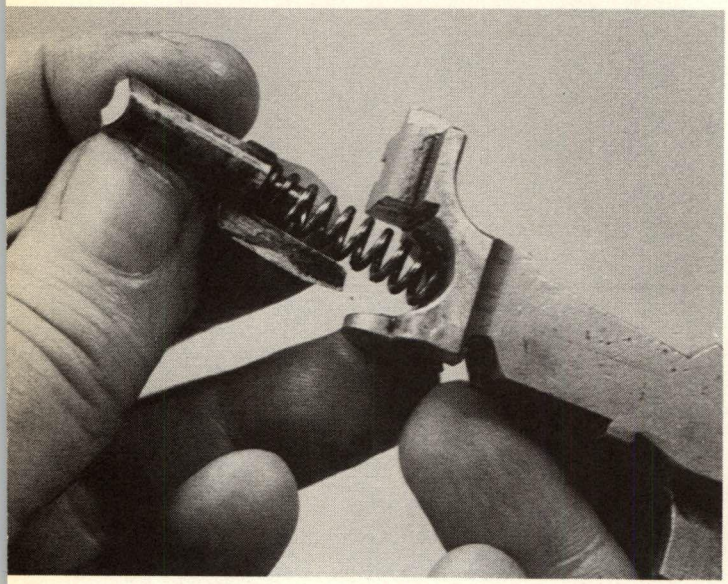


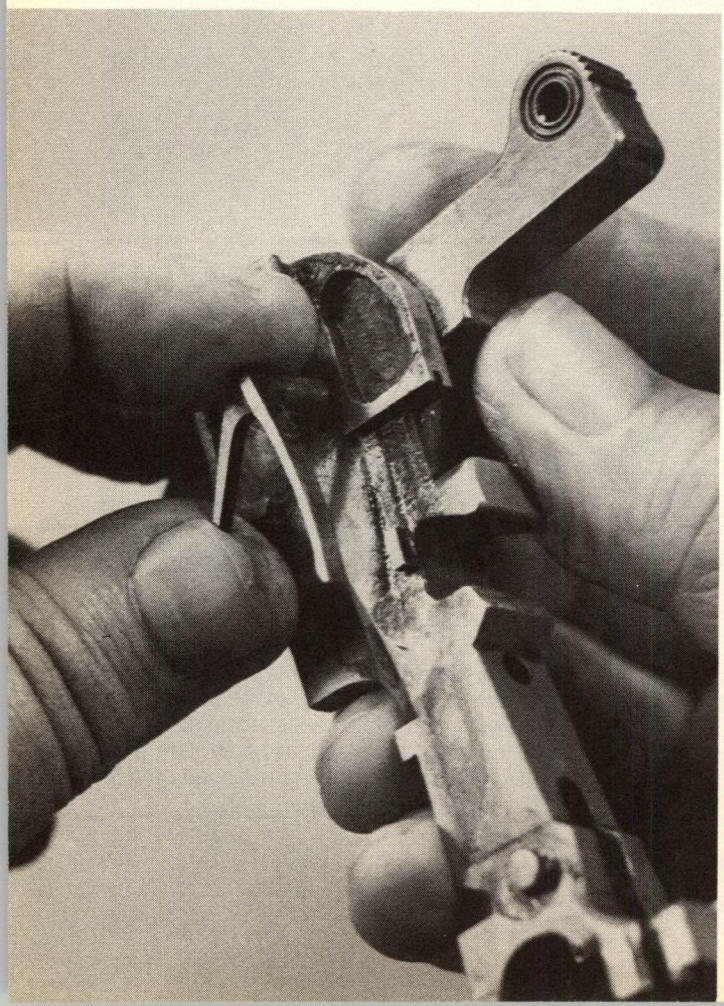
16. Rotate the sear to the position shown, until its forward lip clears its recess in the sub-frame, and remove the sear toward the right.



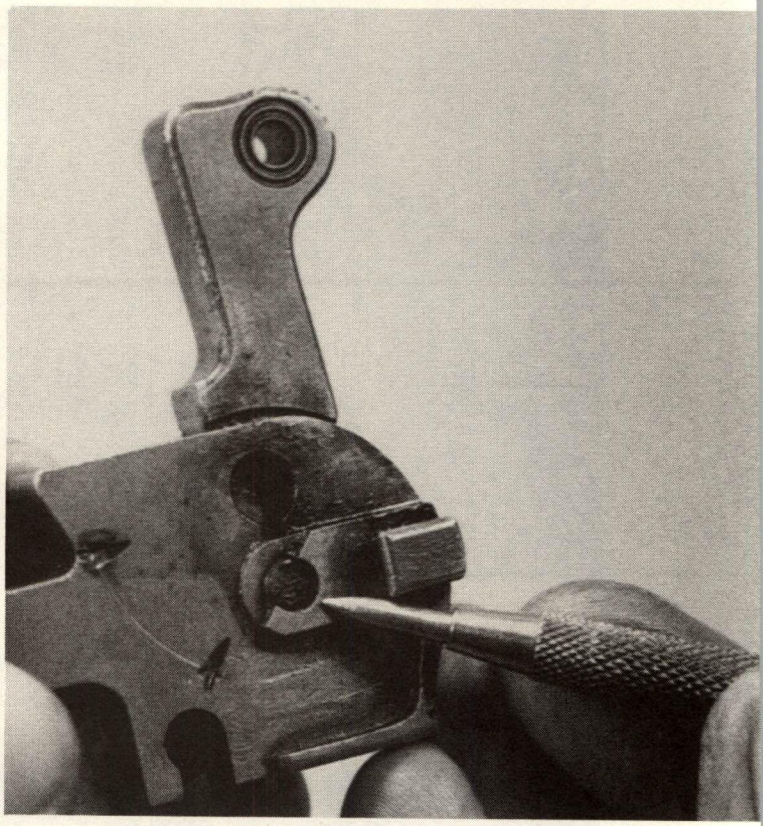
17. Depress the rocker plunger at the front of the sub-frame, and remove the rocker coupling from the underside. **Caution:** *The mainspring is under heavy tension, even with the hammer at rest, so proceed carefully.* It may be necessary to clamp the sub-frame in a padded vise for this operation. The photo shows the rocker coupling removed, and in the proper orientation for replacement.

18. Remove the rocker plunger, mainspring, and mainspring plunger from the sub-frame toward the front.



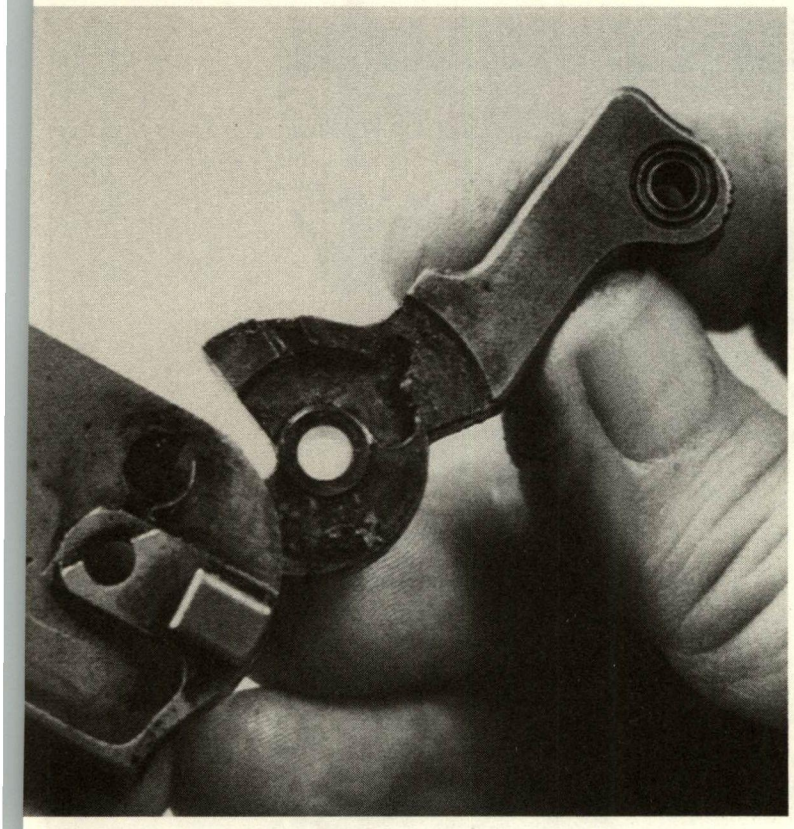


19. Push the hammer pivot toward the right side for removal.

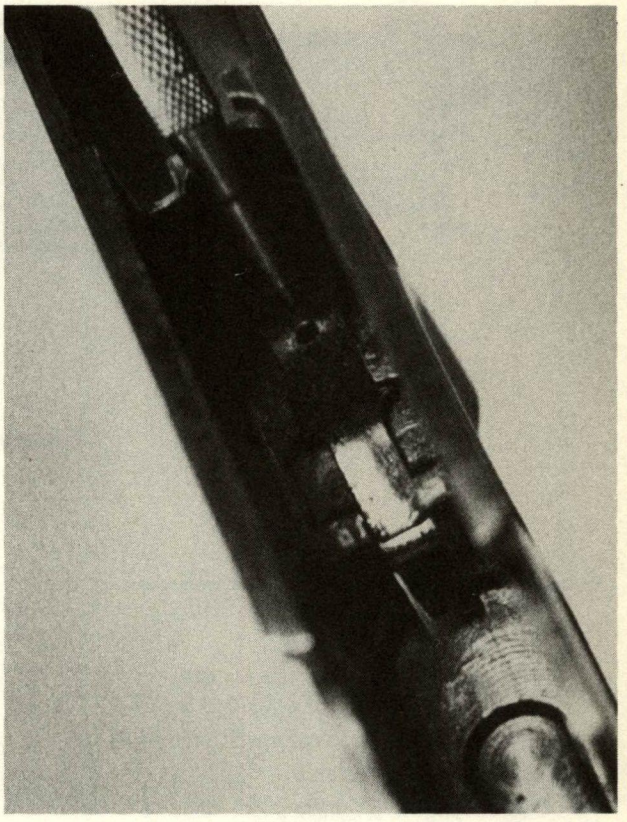


20. The right end of the hammer pivot is formed into the springs for the takedown latch and the sear-lever. Remove this part carefully to avoid breakage.

21. Remove the hammer from the top of the sub-frame.



22. The flat spring in the floor of the grip frame retains the magazine floorplate latch and the trigger. Its front end is hooked down into a groove in the floorplate latch. Insert a small tool in the hole in the forward part of the spring, lift it slightly at the front, and slide it to the rear out of its slots in the frame. The floorplate latch and the trigger can now be removed upward.



Reassembly Tips:

When replacing the rocker coupling, note that its "hook" must be pointed forward (see #17). Unfortunately, it is possible to install the rocker coupling backwards, with disastrous results. When this is done, the pistol can be completely put back together, but the nose of the coupling will lock on the front of the trigger/floorplate latch spring, and no amount of force will disassemble it again. Special tools will be required. So, remember: The "hook" of the rocker plunger goes at the top, and toward the front of the sub-frame.

When replacing the bolt retainer, use a screwdriver through the rear hole of the bolt to slightly compress the recoil spring while inserting the retainer.

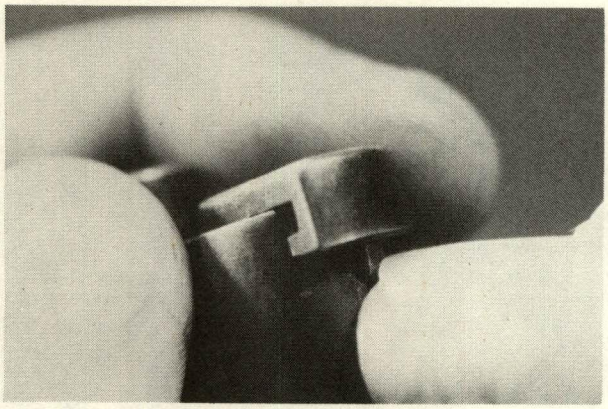
Mauser 1910/34

Data:	Mauser Model 1910
Origin:	Germany
Manufacturer:	Waffenfabrik Mauser, A.G., Oberndorf
Cartridge:	6.35mm Browning (25 ACP)
Magazine capacity:	9 rounds
Overall length:	$5\frac{3}{8}$ inches
Height:	$4\frac{3}{16}$ inches
Barrel length:	$3\frac{1}{16}$ inches
Weight:	$15\frac{1}{2}$ ounces

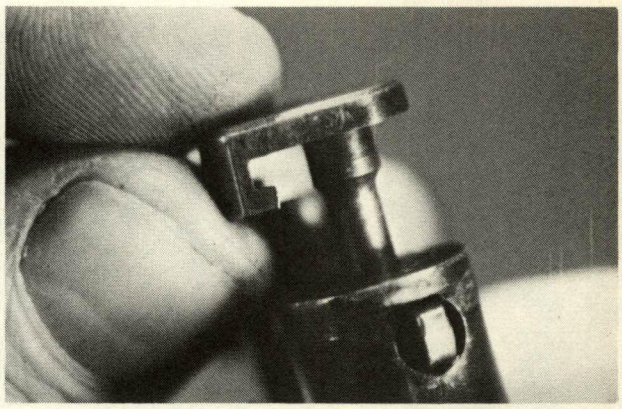
The 25-caliber version of the Mauser Pocket Pistol is the only true Model 1910. The 32 chambering did not come along until 4 years later, and the slightly larger 32 pistol is properly called the Model 1914. Both pistols were slightly redesigned in 1934, so that year/model designation can be in either caliber. The Model 1910 is a typical example of fine European gunmaking of the old school, the fit, the finish, and quality being superb. Like many of the earlier auto-pistol designs, it has many flat springs, and these break with some frequency. Although the gun now has much collector interest, many of them are still in everyday use.

Field Strip:

1. With an empty magazine in place, draw back the slide until it locks open and depress the small takedown catch, located on the underside of the frame, just behind the barrel retaining rod.



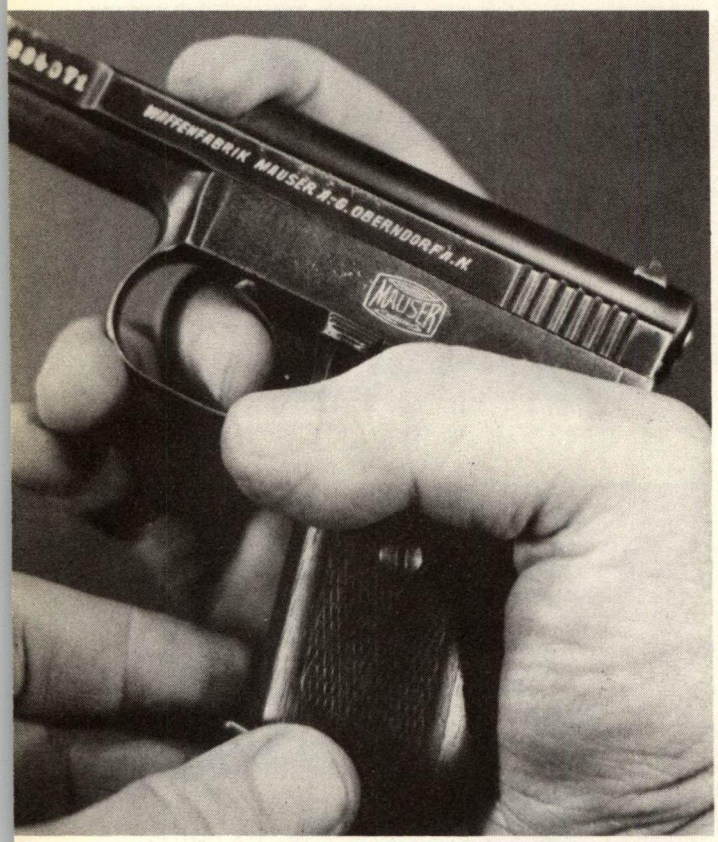
2. Turn the barrel retaining rod head to the side (while holding down the catch), and draw the rod forward out of the frame.



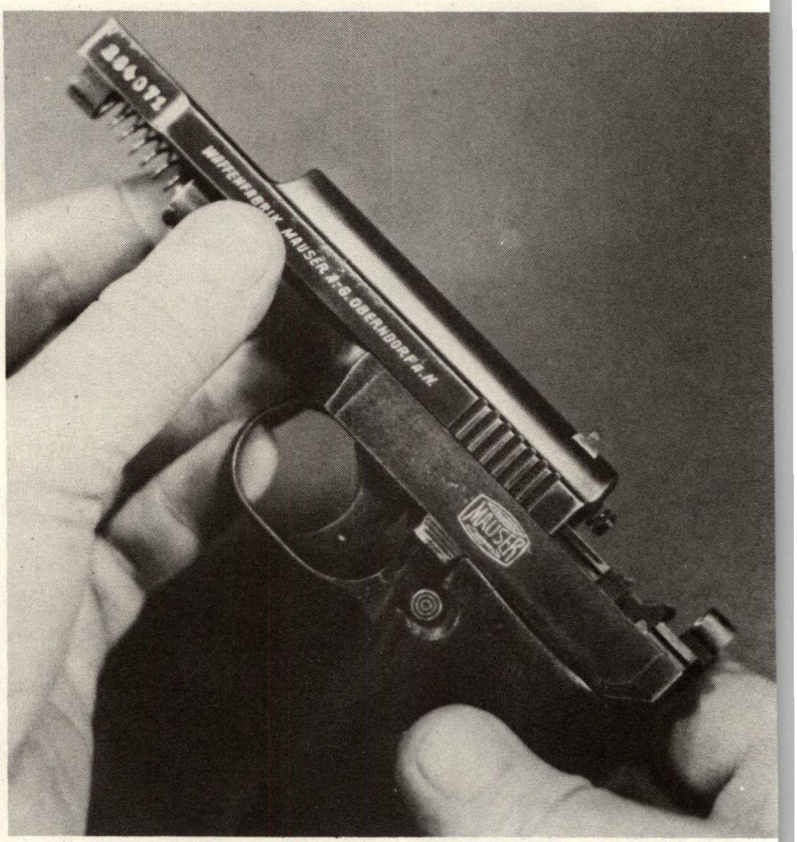
3. Lift the barrel straight up out of the frame and slide.

4. Holding the slide against the tension of the recoil spring, withdraw the magazine slightly and push it back in to free the slide. Ease the slide forward slowly.

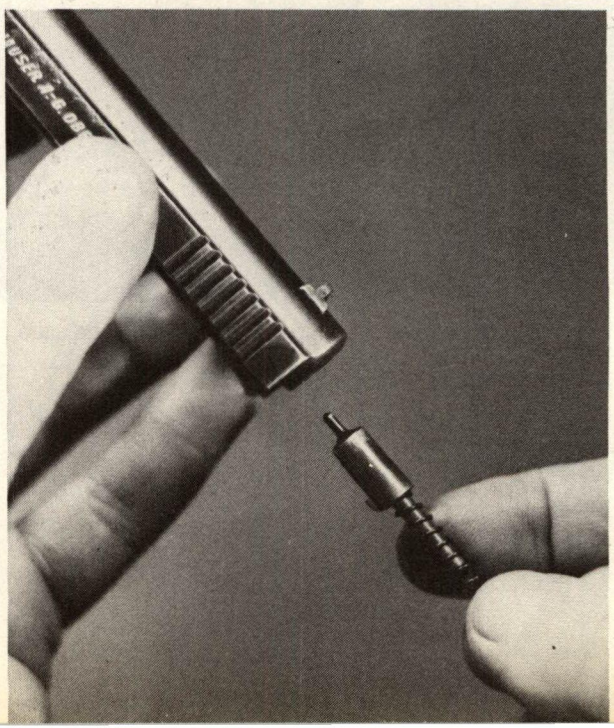
5. Stop the slide at its normal battery position, the back edge even with the frame, and pull the trigger to drop the striker. The slide must be positioned exactly, or the disconnector will prevent striker fall.



6. Withdraw the magazine, and run the slide forward off the frame. The recoil spring and its hollow guide can now be removed from the front of the frame.



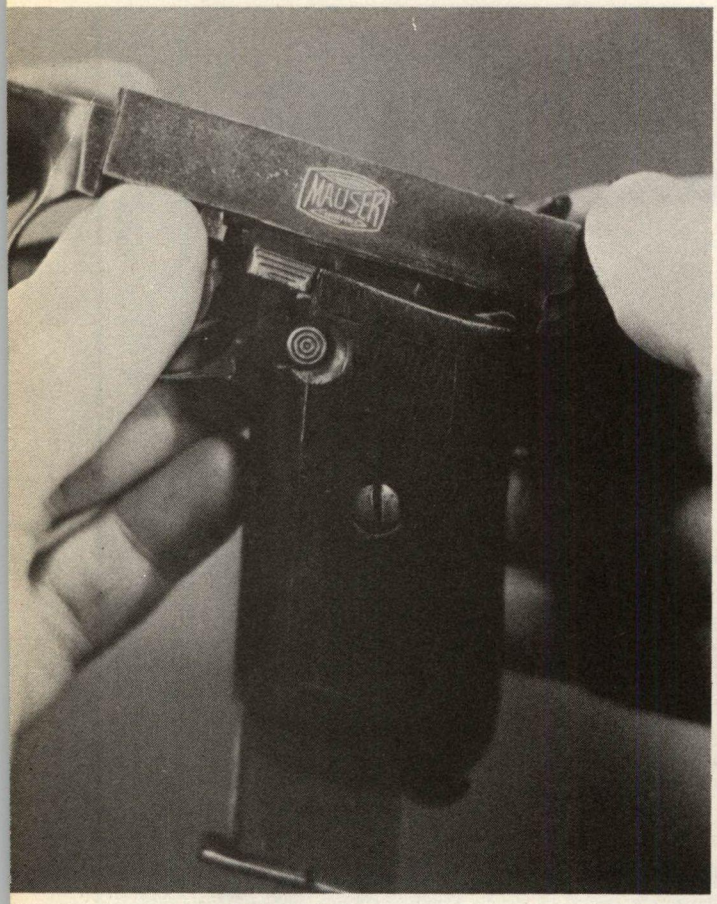
7. Remove the striker (firing pin) and its spring from the rear of the slide. **Gun is now field-stripped.**



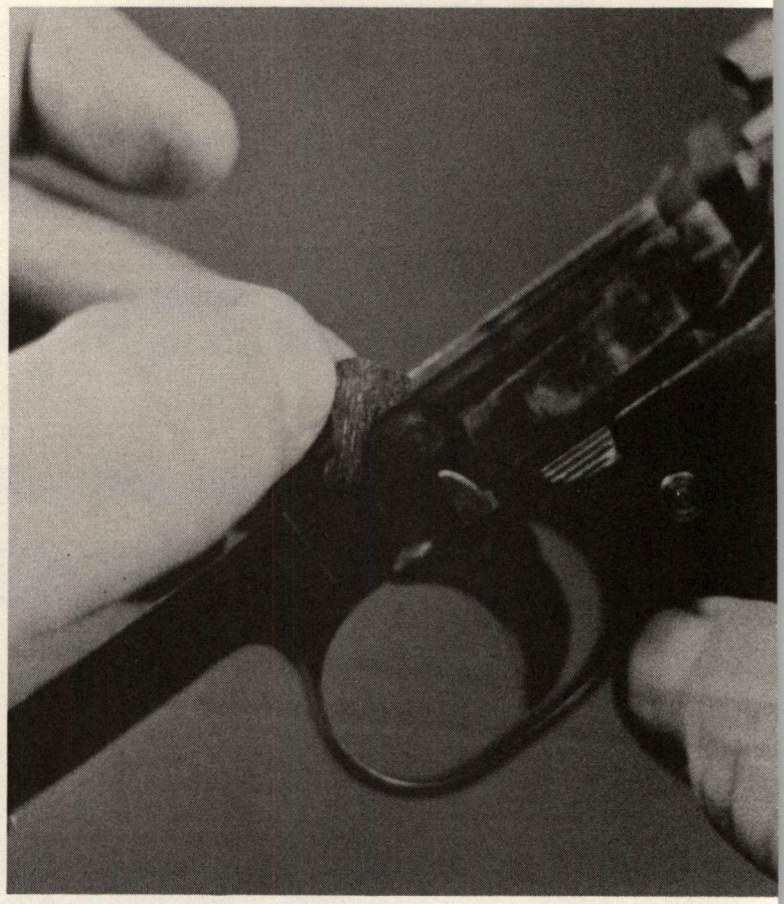
Mauser 1910/34 field-stripped

Detail Strip:

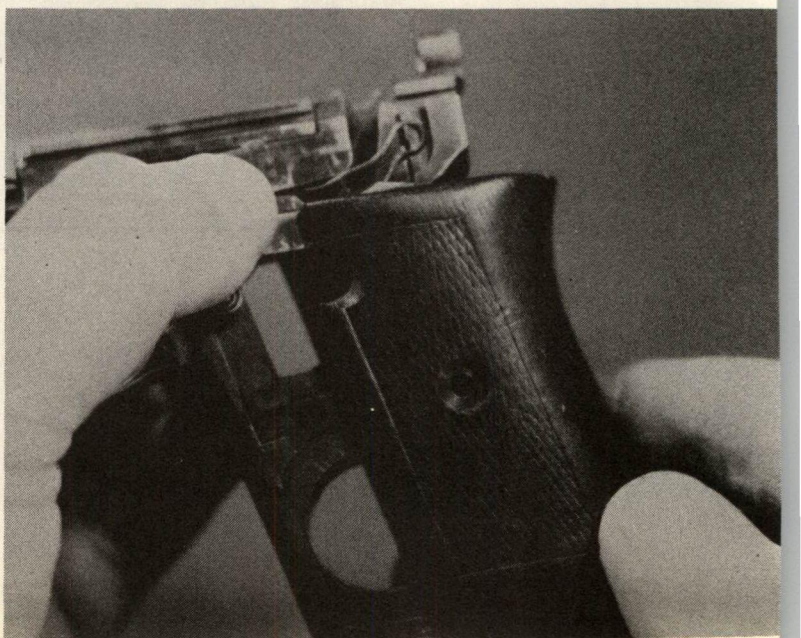
8. Slide the sideplate upward to this point, then swing the rear portion up to free it from the frame. **Note:** The earliest version of the 1910 pistol has a latch just above the trigger guard to remove the side plate.



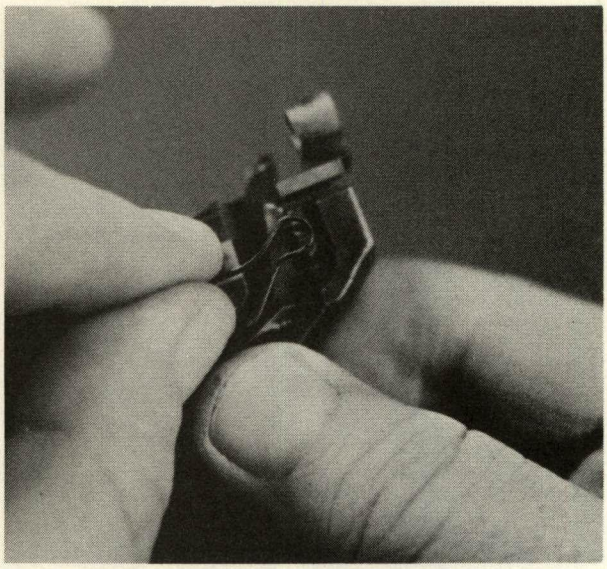
9. The disconnector, located just above the trigger, can now be lifted from its recess in the frame.



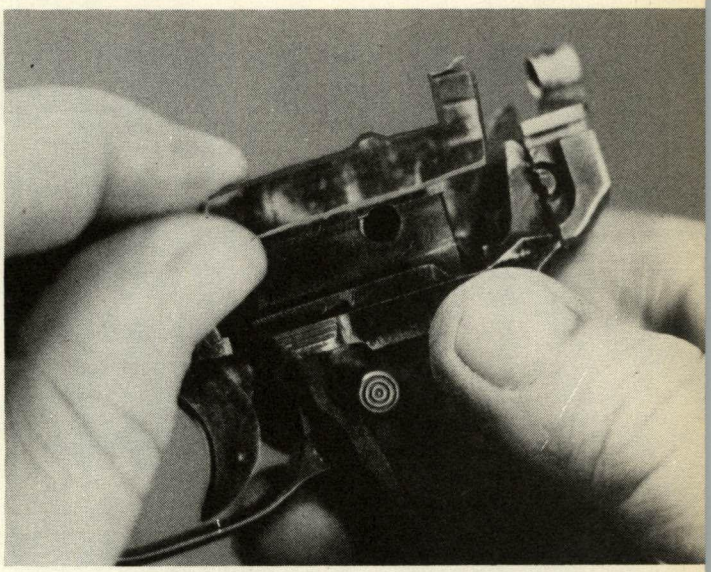
10. Removal of both grip screws will allow the one-piece grip to be slid off toward the rear. **Caution:** *As this is done keep pressure on the internal parts, as some will be freed by the removal of the grip.*



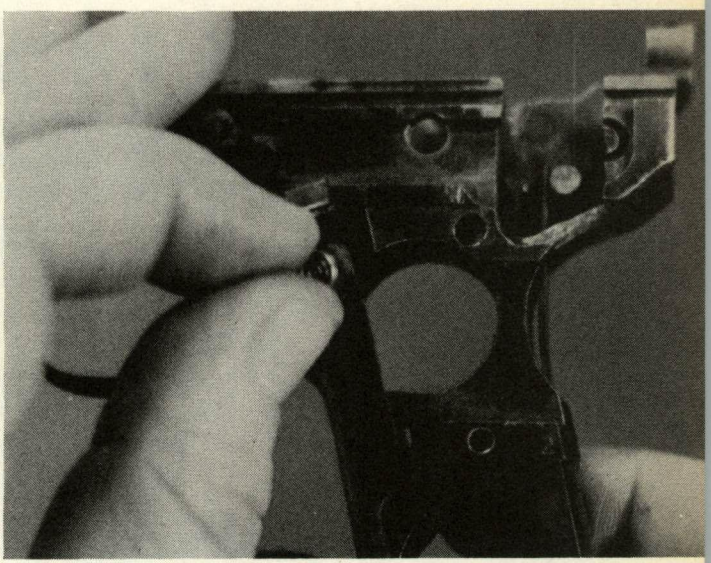
11. Keeping pressure on the safety bar, remove the combination sear and safety bar spring from its recess in the frame.



12. The sear may now be lifted away from the frame.

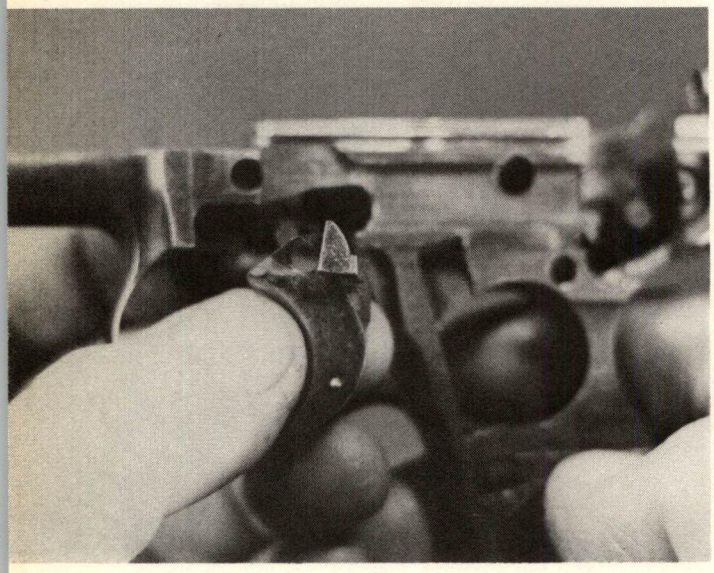


13. The safety bar, when released, will be forced away from the frame by the tension of its release button spring, and can be removed.

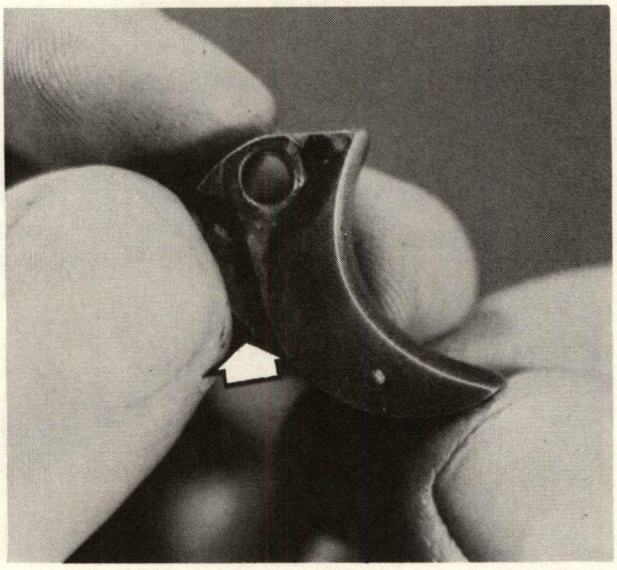


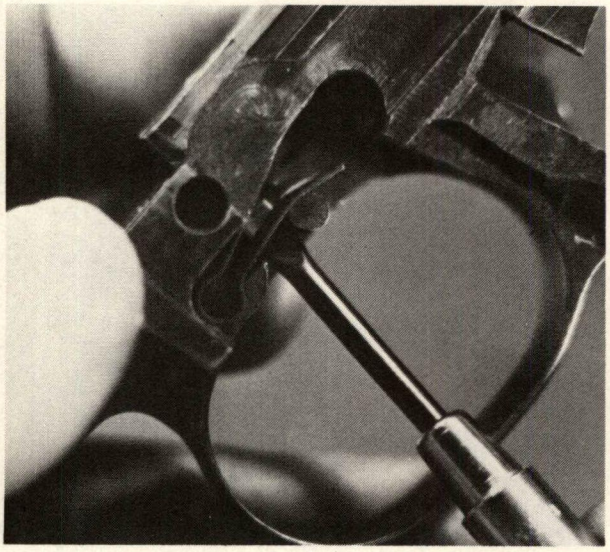
14. The safety bar release is keyed into the frame at its lower end, and can now be carefully pivoted outward and removed.

15. The trigger may be simply moved straight out to the left, slipping it off its fixed post in the frame.

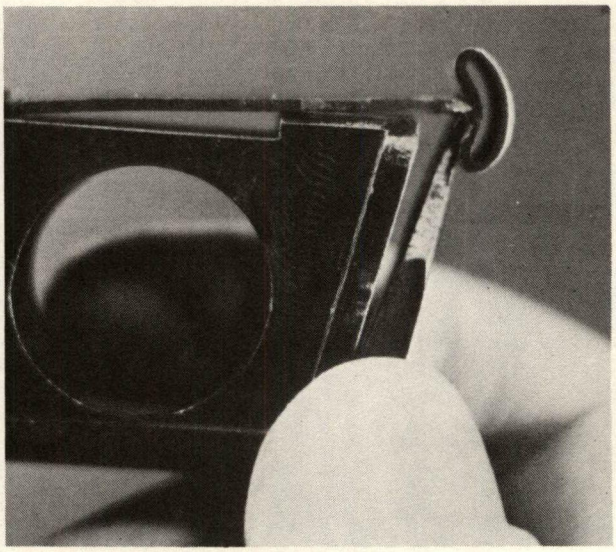


16. If necessary for repair or refinishing, the sear lever (arrow) inside the trigger and its spring can be removed by forcing out the small cross-pin with a drift of proper size.



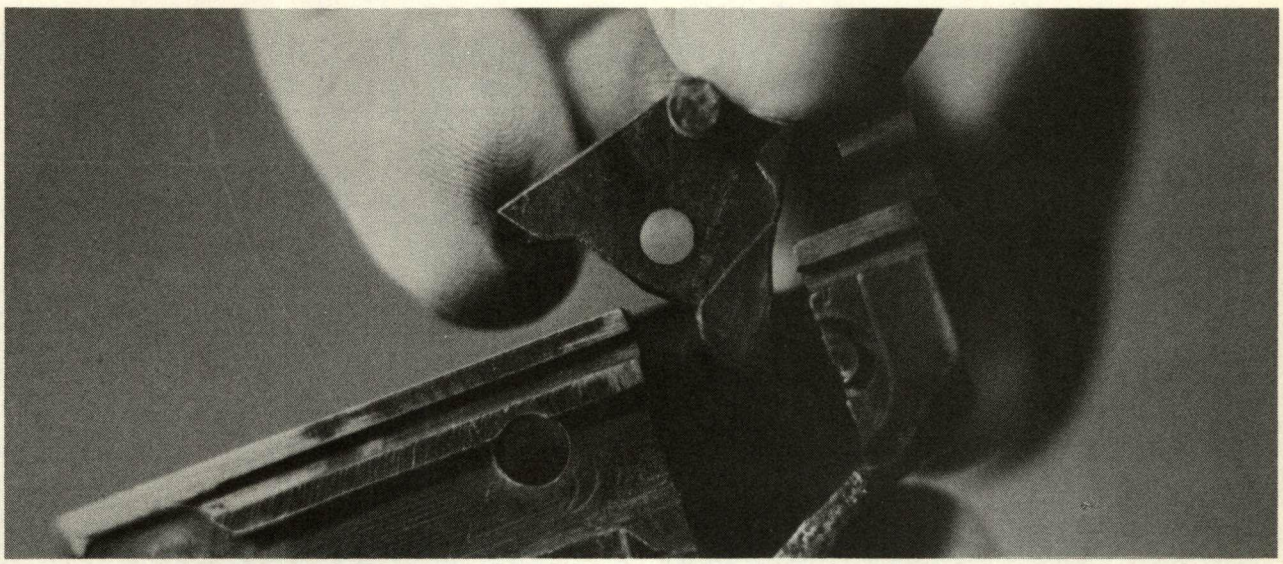


17. The trigger spring can be removed by sliding a sharp tool, such as a small screwdriver, beneath it and working it carefully out of its recess.

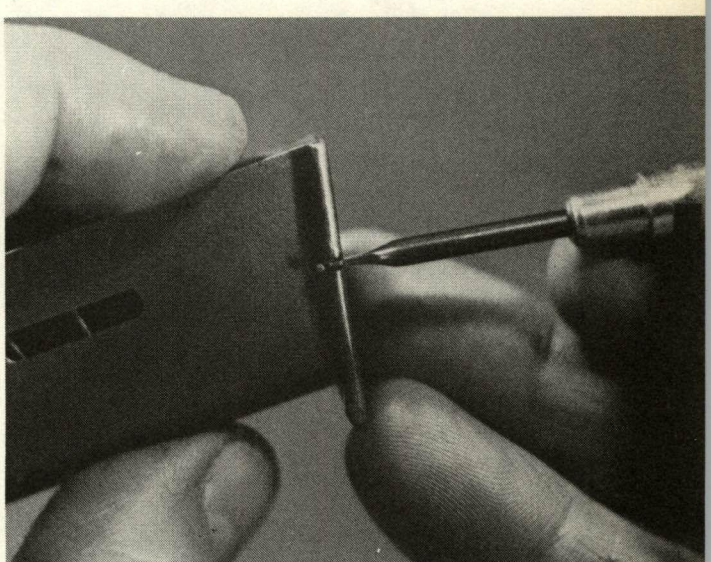


18. Use a larger screwdriver to lift the magazine catch just enough to clear its stop shoulders on the back of the frame, and slide it out toward the bottom of the grip frame. **Caution:** *Lift it only enough to clear or it may break.*

19. The upper end of the magazine catch also serves as the spring for the combination hold-open device, ejector, and magazine safety. This part can now be rotated to the position shown, and removed from its fixed pivot in the frame.



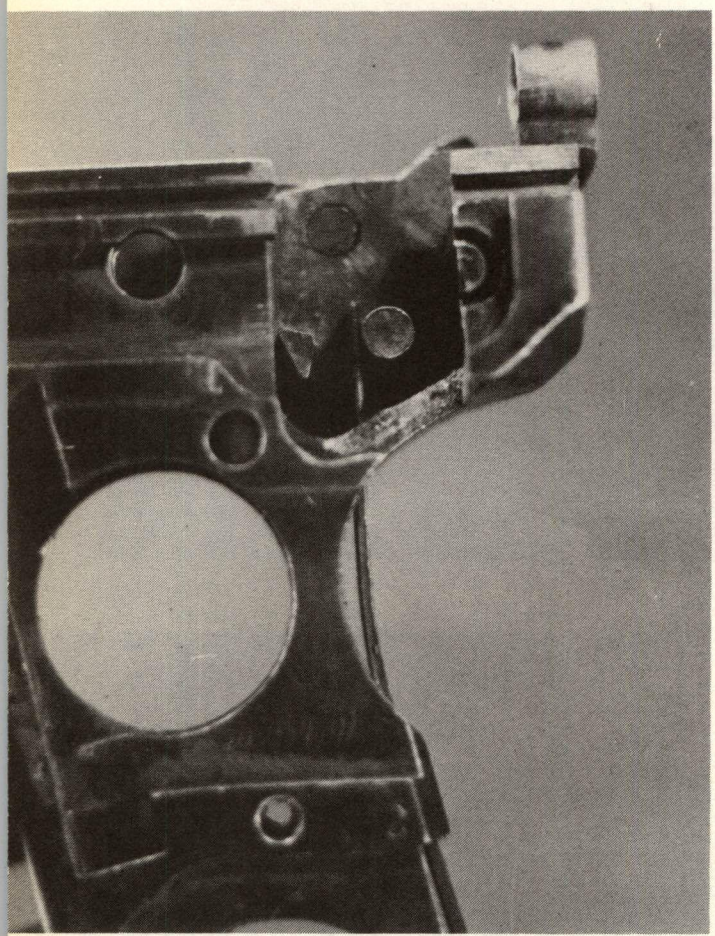
20. If your Mauser is an early one, with a "neck" at the rear of the extractor, lift the extractor from inside the slide, just enough to clear, and lever it gently toward the front until it is free of the slide. If you have a later gun, with a "straight" extractor, don't do as the illustration shows. Instead, look inside the striker tunnel on the right side, and you will see the rear lug of the extractor. Use a drift to force it gently outward and toward the front of the slide.



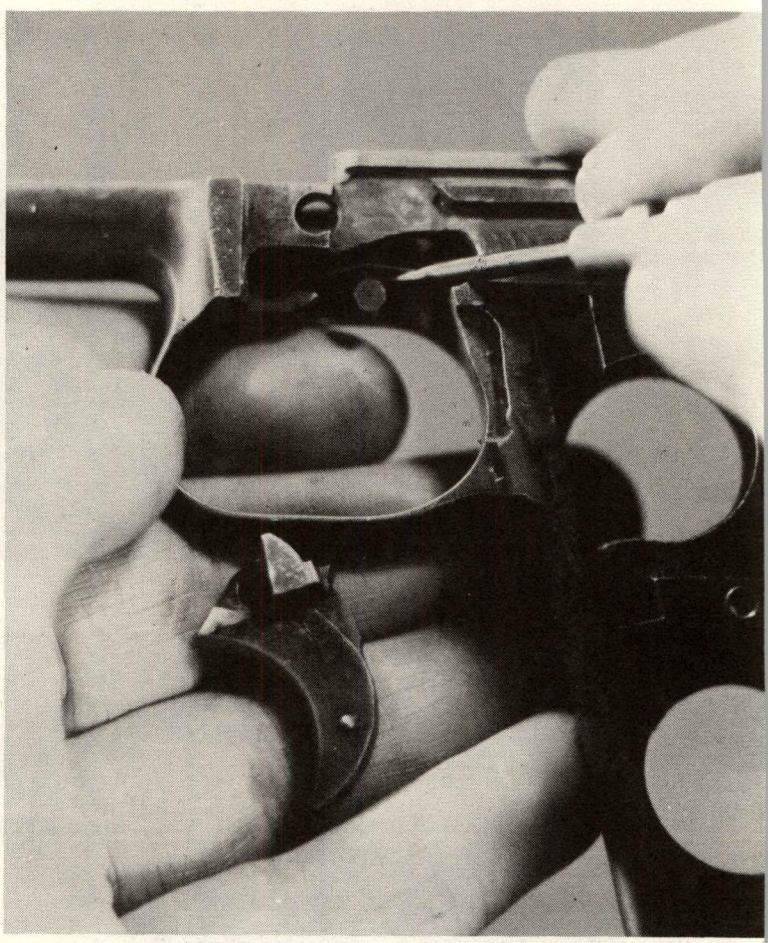
21. To remove the magazine floorplate, use a small screwdriver to force the locking tip of the magazine spring from its slot in the floorplate, and slide the floorplate off toward the front. **Caution:** *This will release the magazine spring. Use a shop cloth to ease it out.*

Reassembly Tips:

1. When replacing the magazine catch, be sure that the combination hold-open, ejector, and magazine safety piece is put in first, and see that the upper end of the catch lies in front of the round lug on the part, as shown.



2. When replacing the trigger, use a small tool to slightly lift the lower arm of the trigger spring before sliding the trigger back into place.



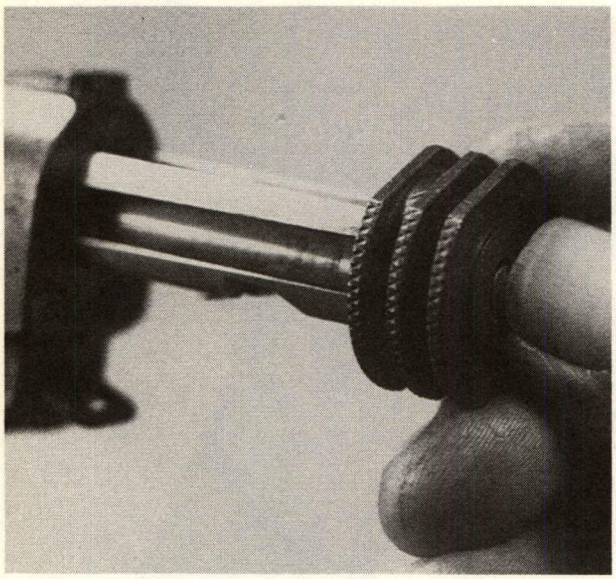
Nambu Type 14

Data:	Nambu Type 14
Origin:	Japan
Manufacturer:	Various government arsenals
Cartridge:	8mm Nambu
Magazine capacity:	8 rounds
Overall length:	9 inches
Height:	$5^{7}/_{8}$ inches
Barrel length:	$4^{11}/_{16}$ inches
Weight:	32 ounces

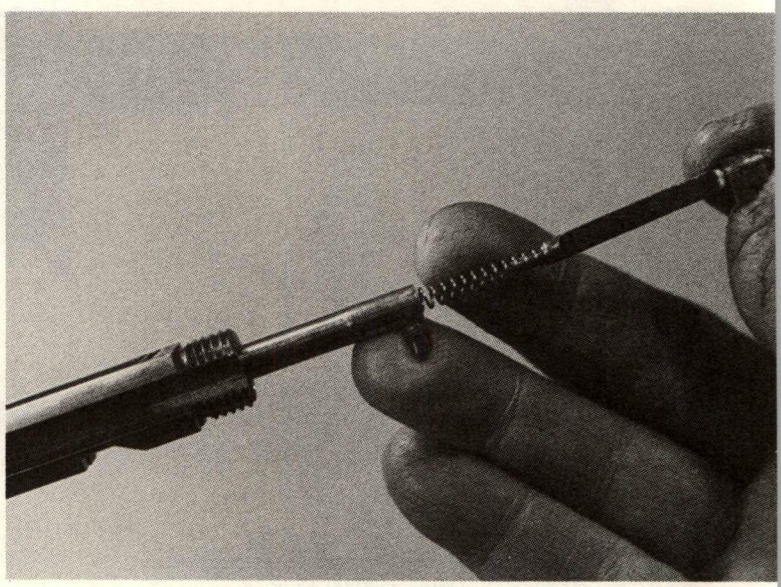
The Type 14 pistol, adopted by the Japanese military in 1925, was a redesign of an earlier gun invented by Colonel Kijiro Nambu around 1904. There are two distinct variations of the Type 14. Not all of the internal parts will interchange, but the takedown of the two versions is essentially the same. The latter type has an extended front loop of the trigger guard, and a longer firing pin, among other differences.

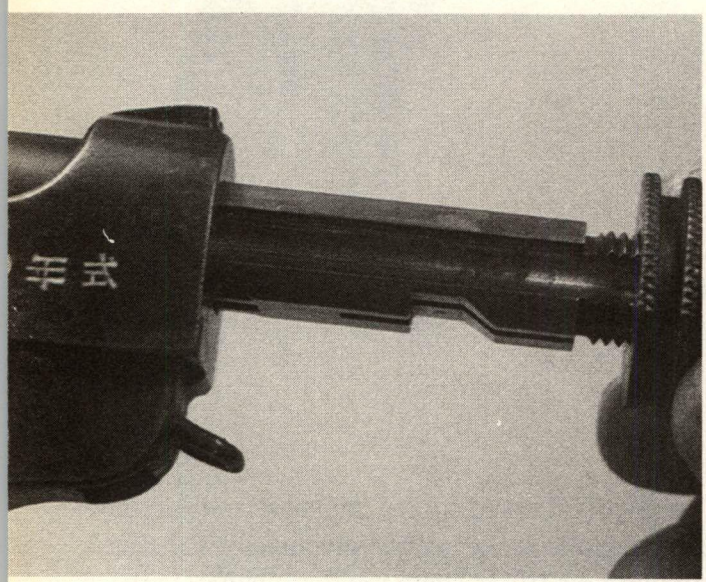
Field Strip:

1. With an empty magazine in place, pull back the bolt until it locks open. Depress the striker spring guide button at the rear, and while holding it in, unscrew the bolt retracting knob and remove it.

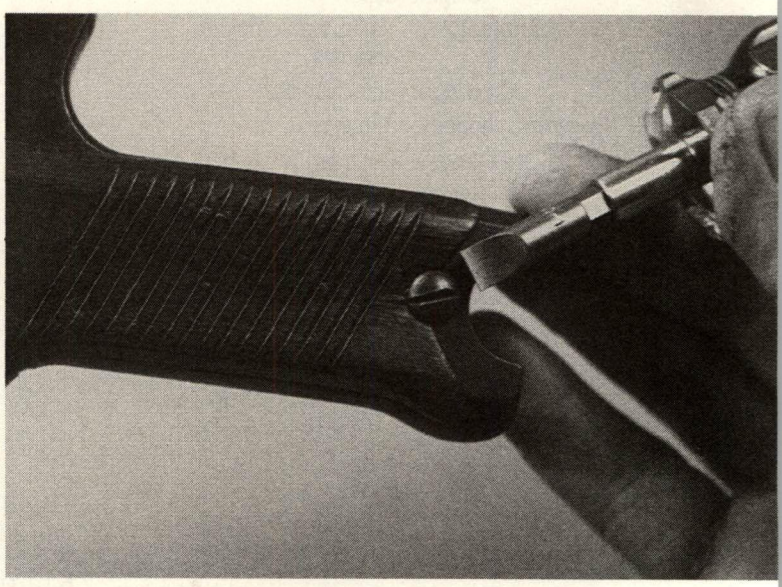


2. Remove the striker spring guide, spring, and the striker (firing pin) from the rear of the bolt.





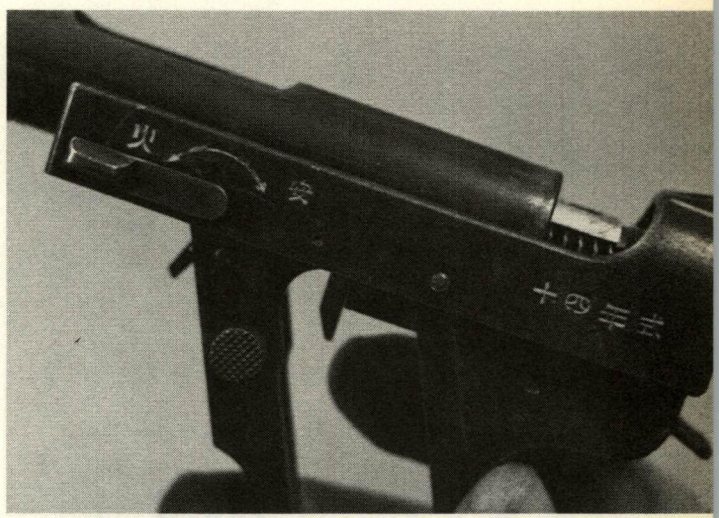
3. Replace the knob on the rear of the bolt to assist in lowering the bolt. Remove the magazine, and gently let the bolt run forward.

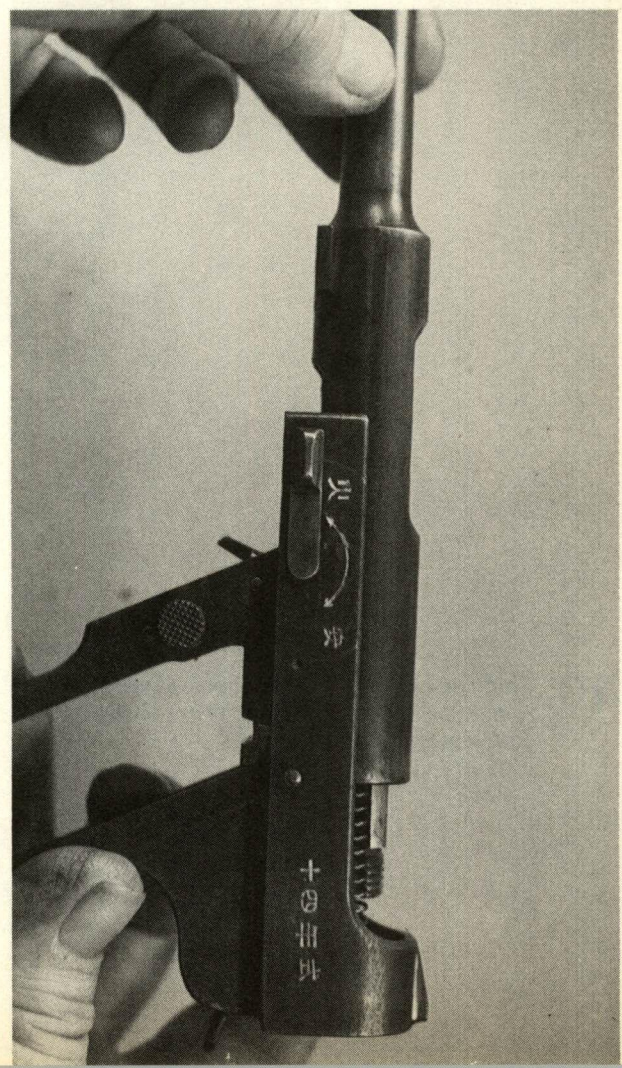


4. Remove the grip screws and the grip panels. Note that the panels extend beneath the top edge of the frame and must be lifted at the lower end, then pulled down for removal.

5. Move the barrel assembly to the rear until it stops, push in the magazine release button as far as it will go, and slide the trigger guard down along the line of the grip frame for removal. If necessary for repair, the trigger pivot pin and the disconnector pin in the trigger can be drifted out to free these parts and their attendant springs.

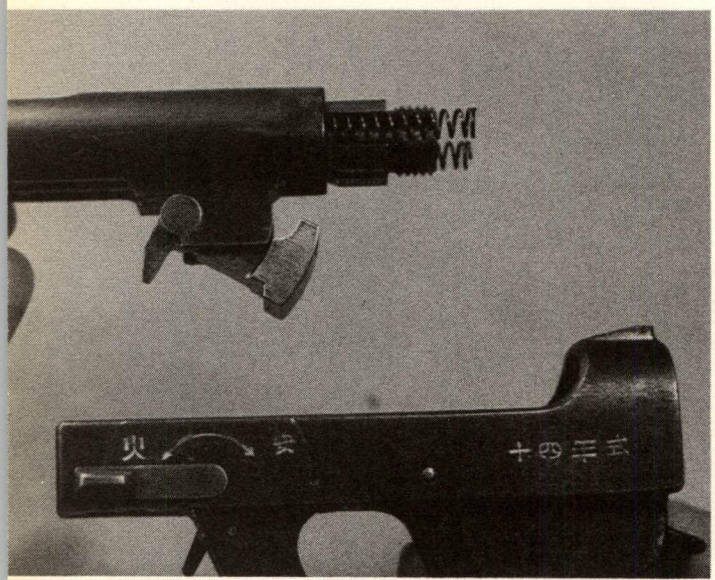
6. Remove the bolt knob, and allow the bolt and barrel assembly to move forward in the receiver.



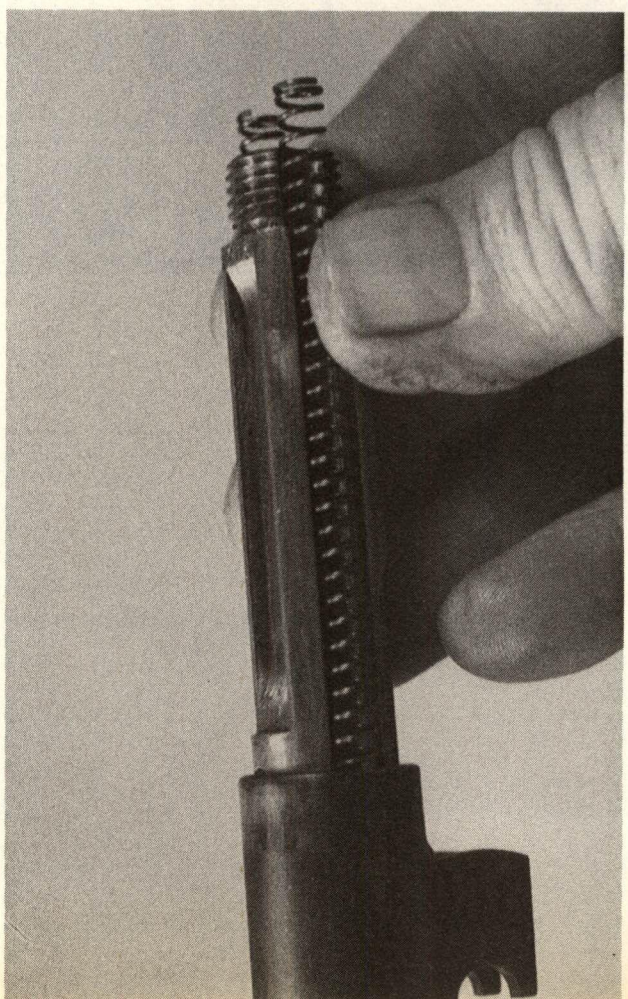


7. When the bolt/barrel assembly has reached this position, it can be removed from the frame.

8. Lift the bolt/barrel assembly straight up off the frame. The locking block will come off with the assembly.



9. Rotate the locking block to the position shown, and it can be removed forward from its pivot recess in the underlug of the barrel extension. Remove the locking block spring from its recess in the frame, at the rear of the magazine well.

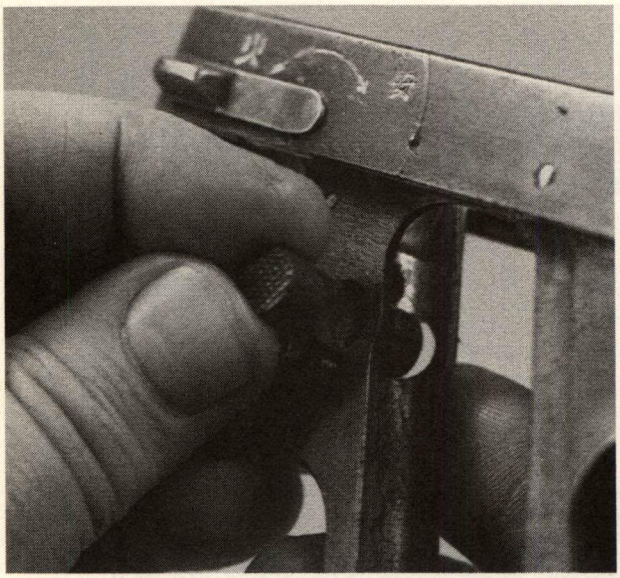


10. Remove the bolt from the barrel extension, and the twin recoil springs from their channels in the bolt. **Gun is now field-stripped.**

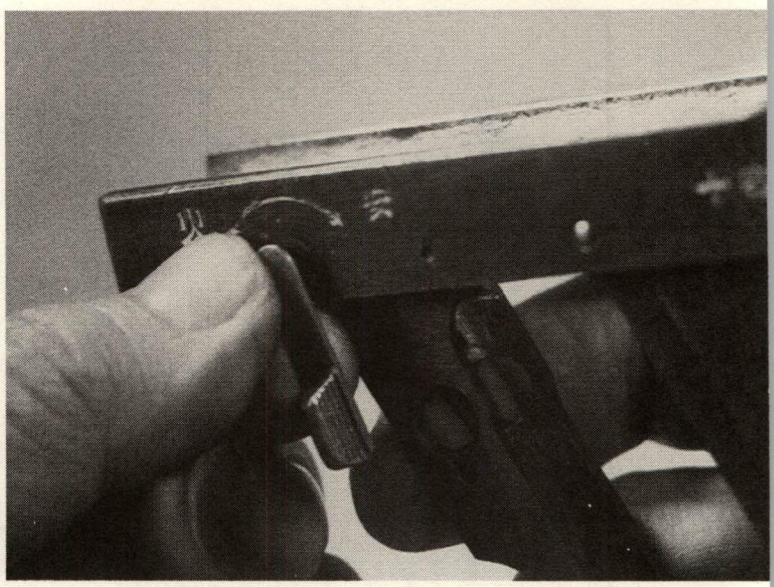
Nambu Type 14 Field-stripped

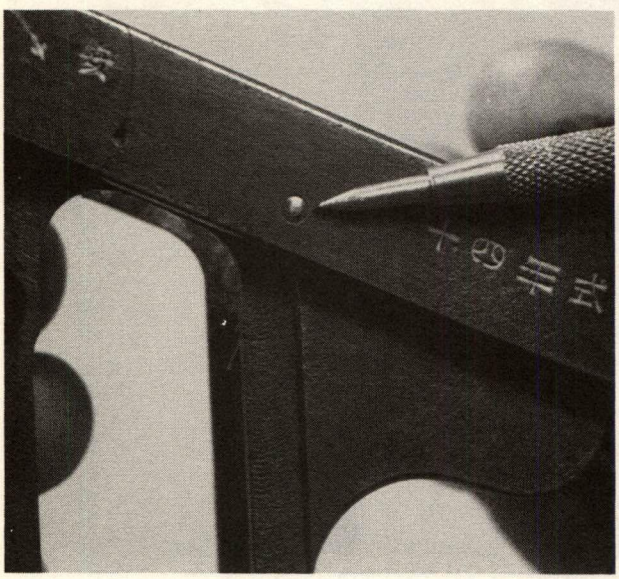
Detail Strip:

11. Removal of the trigger group will release the magazine catch and its spring to be taken off toward the left.



12. Rotate the safety-lever to the position shown, and remove it toward the left. **Caution:** *Find the exact position and use no force or the safety-lever may break off.*

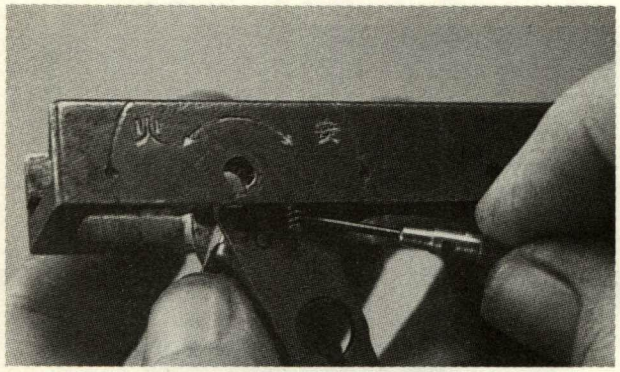




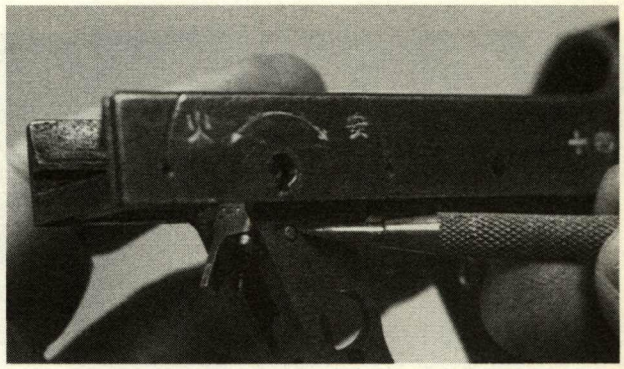
13. The sear pivot pin is located near the center of the left side of the frame wall, and is driven inward to release the sear for removal.

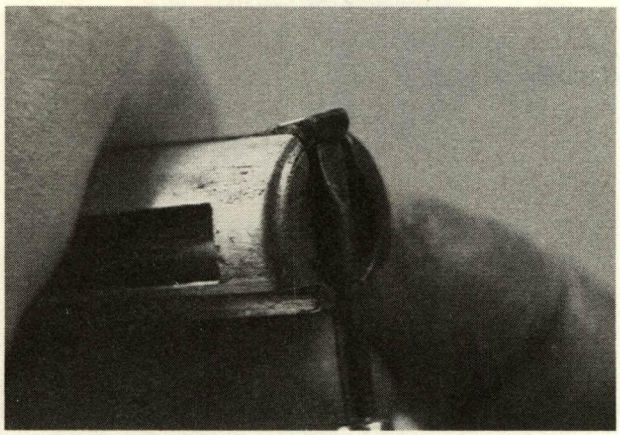
14. After the pin is removed, the sear can be moved down and out of its recess in the frame.

15. After the sear is removed, use a small screwdriver to extract the sear spring from its well in the frame.

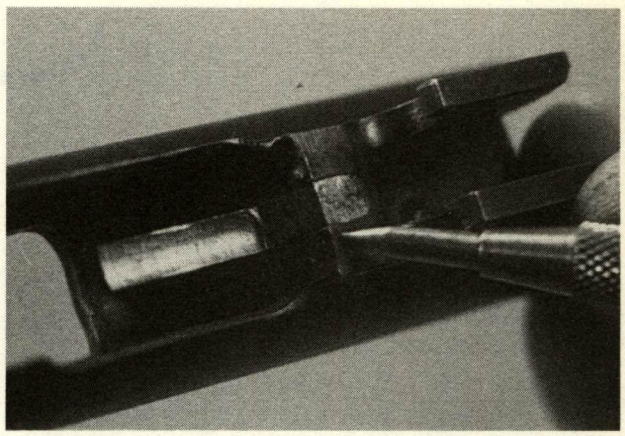


16. A cross-pin at the upper front of the grip frame retains the magazine safety, spring, and plunger.





17. The extractor is dovetail-mounted in the top of the bolt. To remove it, insert a screwdriver under its beak, lift it to clear the retaining lug on its underside, and lever it forward out of its recess in the bolt. **Caution:** *Take care not to lift the front of the extractor too high, or it will snap off.*



18. The ejector is T-slot mounted in the barrel extension, on the underside just forward of the locking block lugs. It is driven forward for removal. Note that it is usually staked in place, and will be difficult to drive out. Removal is not advisable except for replacement.

Reassembly Tips:

When replacing the bolt knob, allow the striker spring guide to seat fully in the knob, with its locking point in its recess in the rear face of the knob. Turn the knob until it stops, then back it off a half turn; orient the knob so the locking point on the guide button is aimed down and toward the left. Push in on the button, and hold it in while turning the knob the rest of the way. When the knob is all the way on, release the button and back off the knob a small amount until the button snaps out to lock it in place.

When replacing the safety-lever, take care not to put heavy pressure on the lever arm, or it may break.

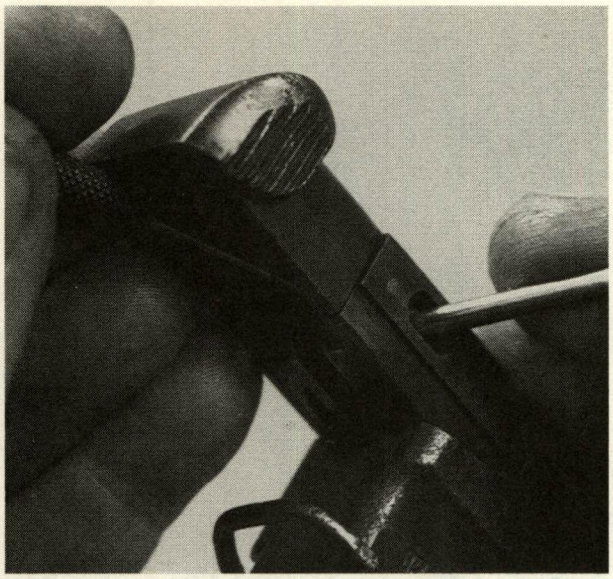
Nambu Type 94

Data:	Nambu Type 94
Origin:	Japan
Manufacturer:	Various government arsenals
Cartridge:	8mm Nambu
Magazine capacity:	6 rounds
Overall length:	$7^{5}/_{16}$ inches
Height:	$4^{5}/_{8}$ inches
Barrel length:	$3^{7}/_{8}$ inches
Weight:	25 ounces

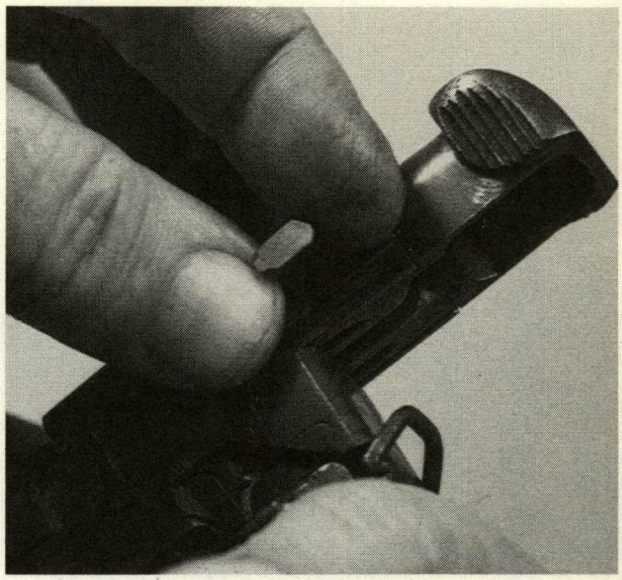
The Type 94 pistol was introduced in 1934 as a gun for commercial export, but in a short time the manufacture was taken over by government arsenals, and it was made in steadily declining quality through World War II. Much has been said and written about one particular feature of the pistol—the long sear bar which is level with the surface on the left side. On the Type 94 pistols that I have examined, it is not easy to push in the forward portion of the sear and fire the gun. It takes a concentrated effort, and is not likely to occur accidentally. It has also been said that the pistol is of poor design, and this is equally untrue. Some of the late wartime guns, though, are of dubious quality.

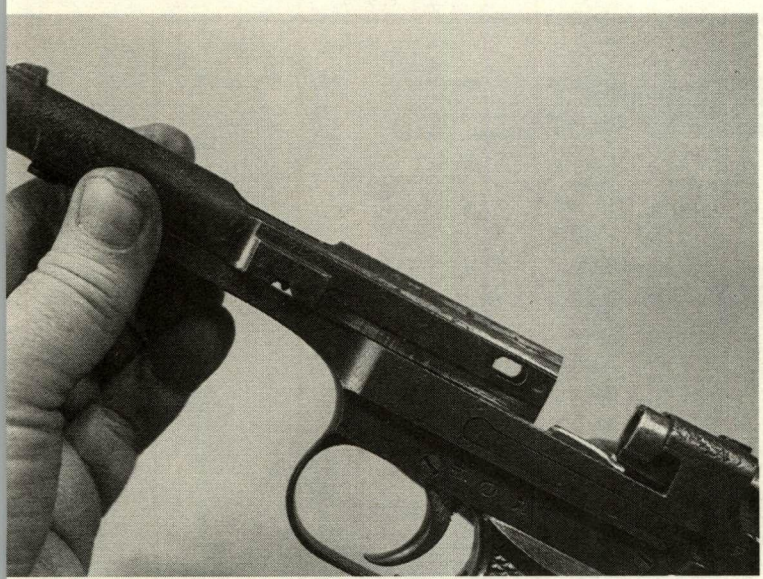
Field Strip:

1. Leave the magazine in the pistol, and draw back the slide until it locks open. Depress the firing pin and push the takedown bar out toward the left side. Don't push it all the way out.

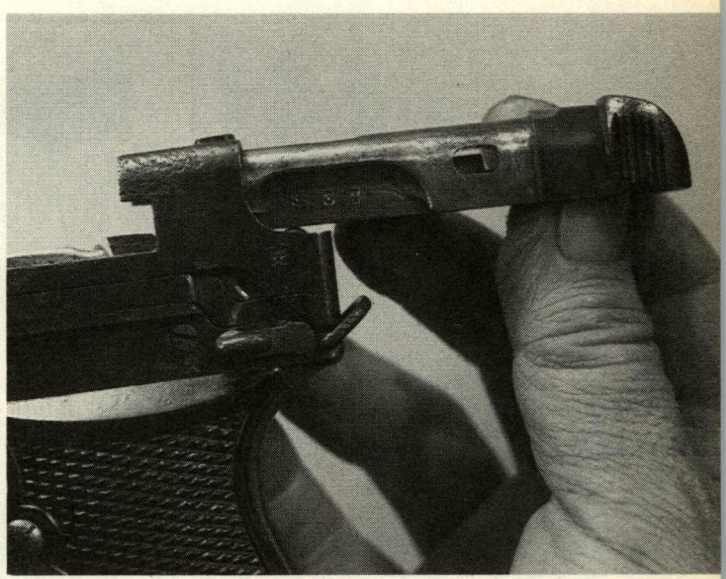


2. While holding the slide as shown, against the tension of the recoil spring, remove the locking bar from the left side.



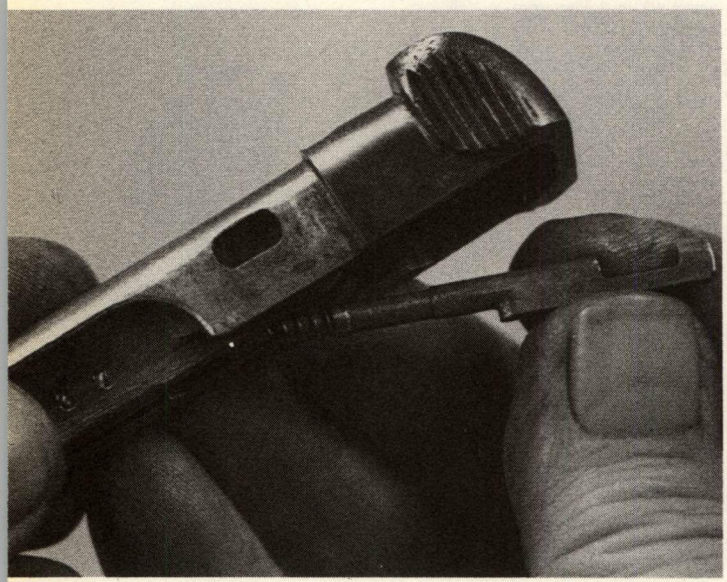


3. Ease the slide forward off the frame. The recoil spring will likely come off with the slide. Remove the magazine.

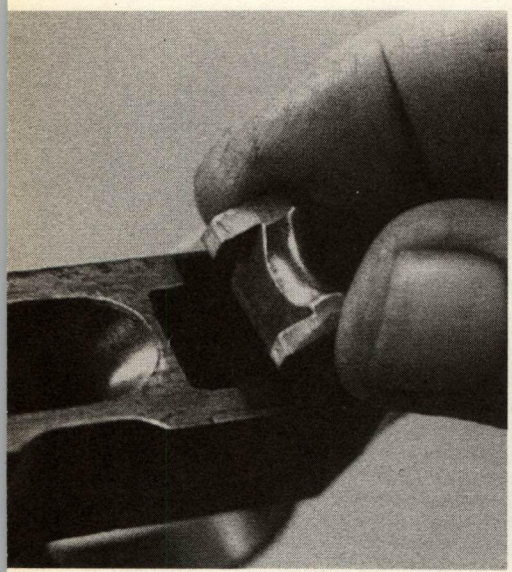


4. Remove the breechblock (bolt) from the rear of the frame.

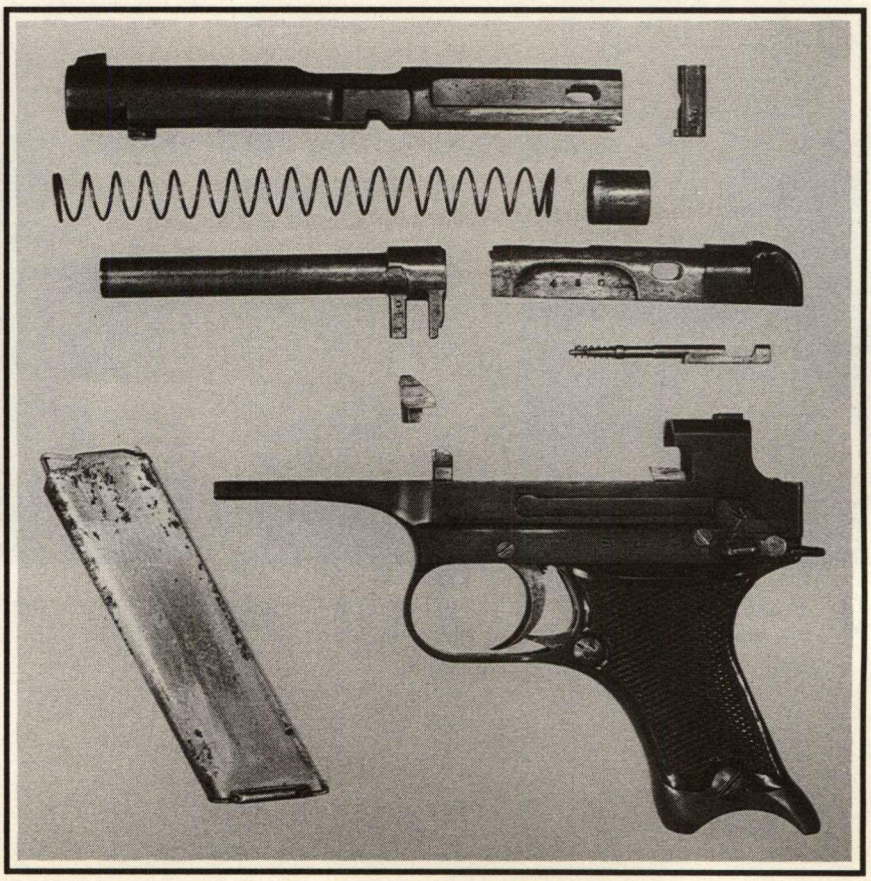
5. Remove the firing pin and spring from the breech-block.



6. Lift the barrel straight up from the top of the frame.



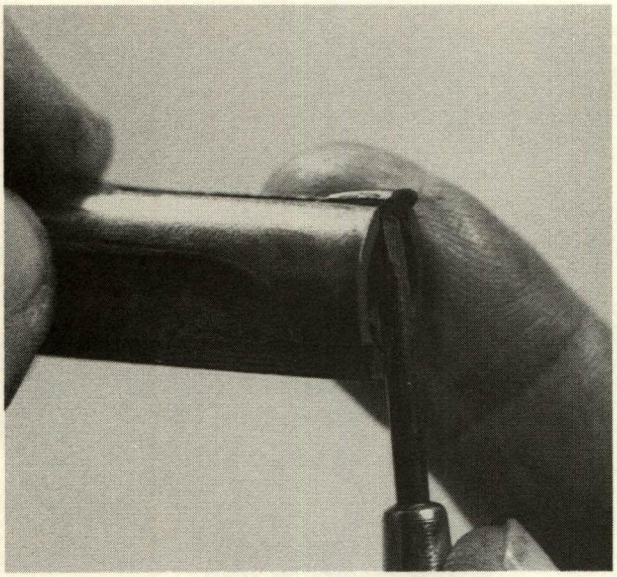
7. Lift the locking block straight up from its recess in the top of the frame. **Gun is now field-stripped.**



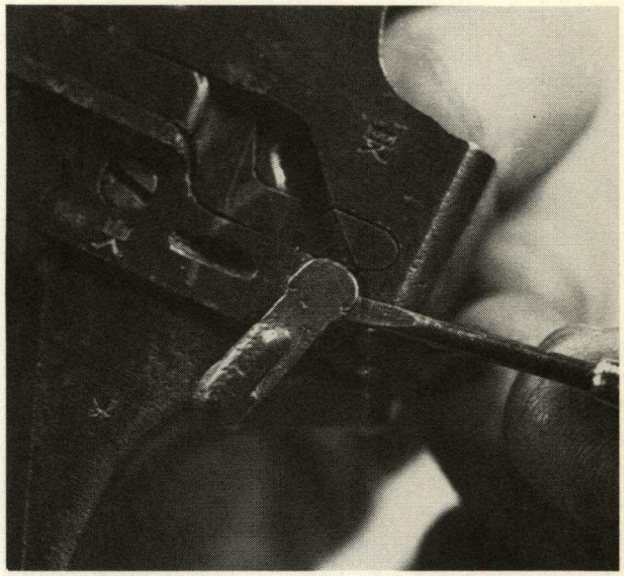
Nambu Type 94 field-stripped

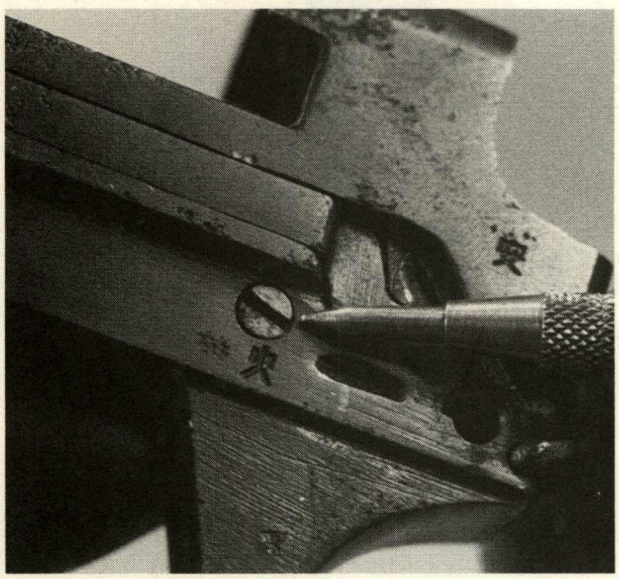
Detail Strip:

8. Gently force the extractor upward to clear its retaining lug in the breechblock, and lever it forward out of its dovetail recess. **Caution:** *Extractor is tempered to be its own spring, and if flexed too far, it will break.*

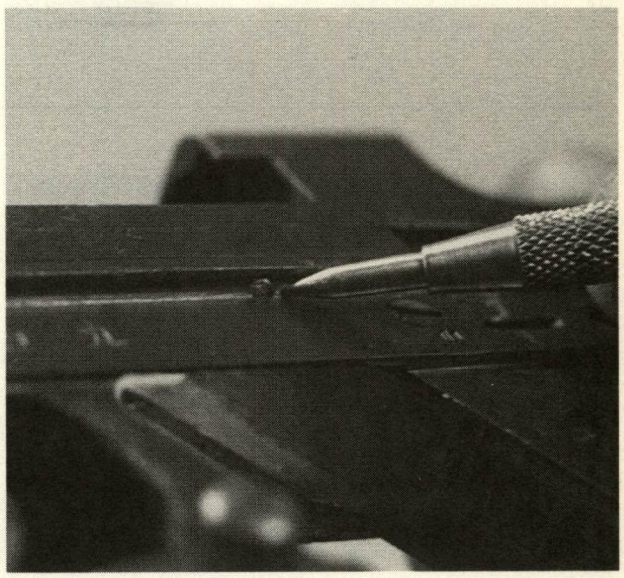


9. With the grips removed, depress the hammer and turn the safety-lever down to the position shown. It can then be removed toward the left side.



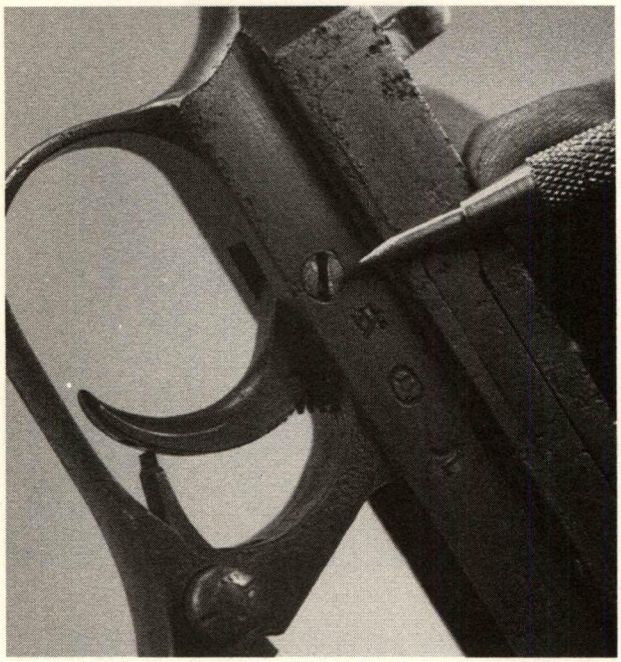


10. The screw just forward of the safety-lever retains the hammer. With the hammer lowered to reduce spring tension, back out the screw and ease the hammer and spring upward and toward the rear for removal.

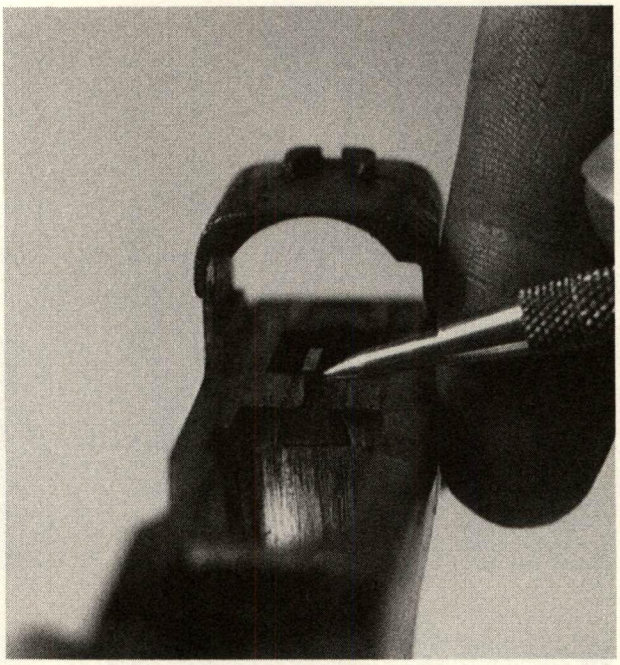


11. The sear is retained by a vertical pin (arrow) in the frame, just forward of the hammer screw. Drift out this pin toward the top of the frame, and remove the sear and its spring toward the left side.

12. The trigger is retained by a cross-screw, and is removed from the top of the frame, along with its spring. The magazine catch button is threaded onto the cross-shaft of the magazine catch, and requires a split-end screwdriver for removal. The button and catch spring are removed toward the left, the magazine catch toward the right side. The magazine safety is also retained by the cross-shaft of the magazine catch, and this part and its spring will be released by removal of the catch.



13. The ejector is dovetail-mounted in the top of the frame at the rear of the magazine well, and can be driven forward for removal.



Reassembly Tips:

Note that there is a thin steel sleeve at the rear of the recoil spring. Be sure that this is kept at the rear during reassembly.

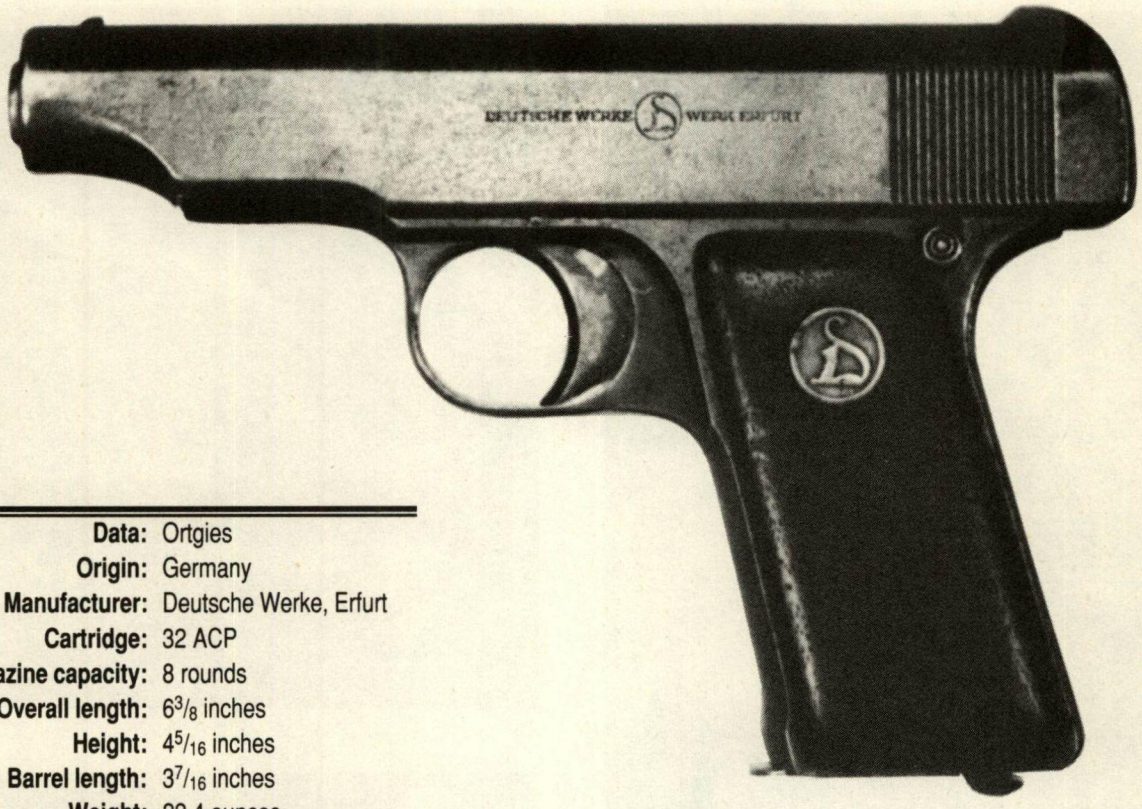
When replacing the locking block in the top of the frame, note that it goes between the underlugs of the barrel, and that the slanted faces of its upper wings should be toward the rear.

The fixed barrel arms on the frame must align with the forward lug of the barrel.

Note that there is a small tab on the locking bar, or takedown bar, which fits into a small recess on the left side of the slide. Be sure that the bar is inserted so that these will match.

Remember to depress the hammer when inserting the safety-lever, and avoid putting heavy pressure on the outer end of the lever during insertion.

Ortgies

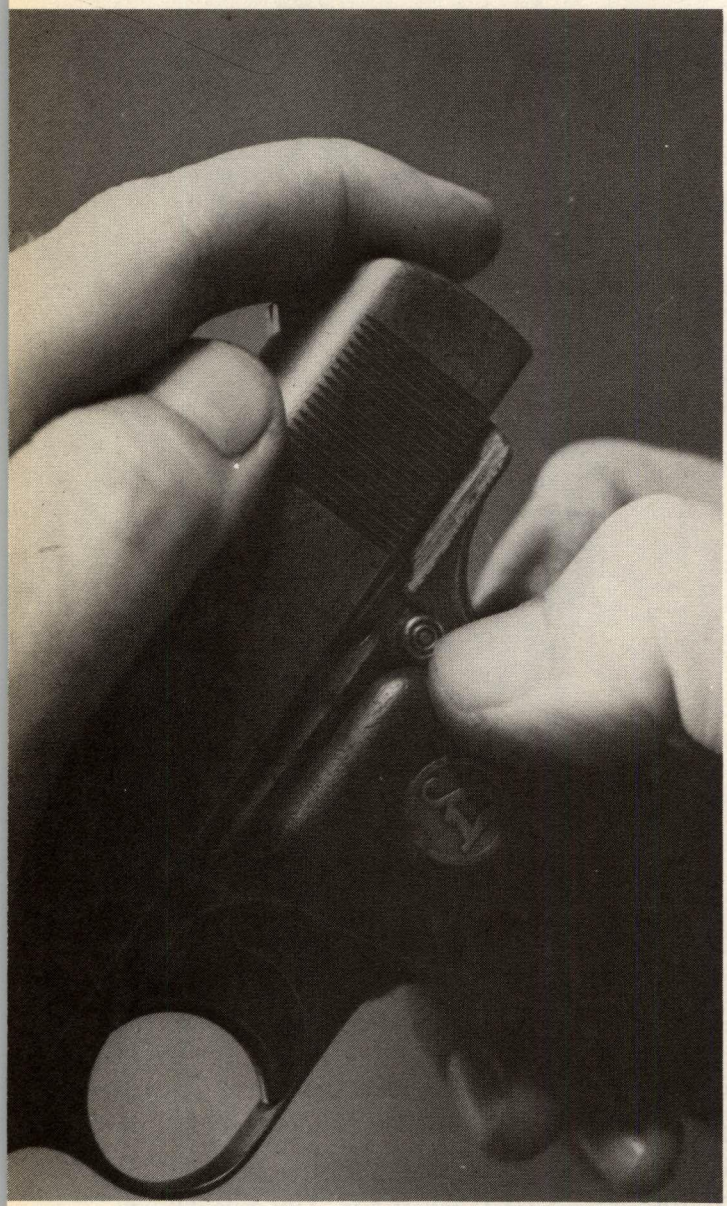


Data:	Ortgies
Origin:	Germany
Manufacturer:	Deutsche Werke, Erfurt
Cartridge:	32 ACP
Magazine capacity:	8 rounds
Overall length:	$6\frac{3}{8}$ inches
Height:	$4\frac{5}{16}$ inches
Barrel length:	$3\frac{7}{16}$ inches
Weight:	22.4 ounces

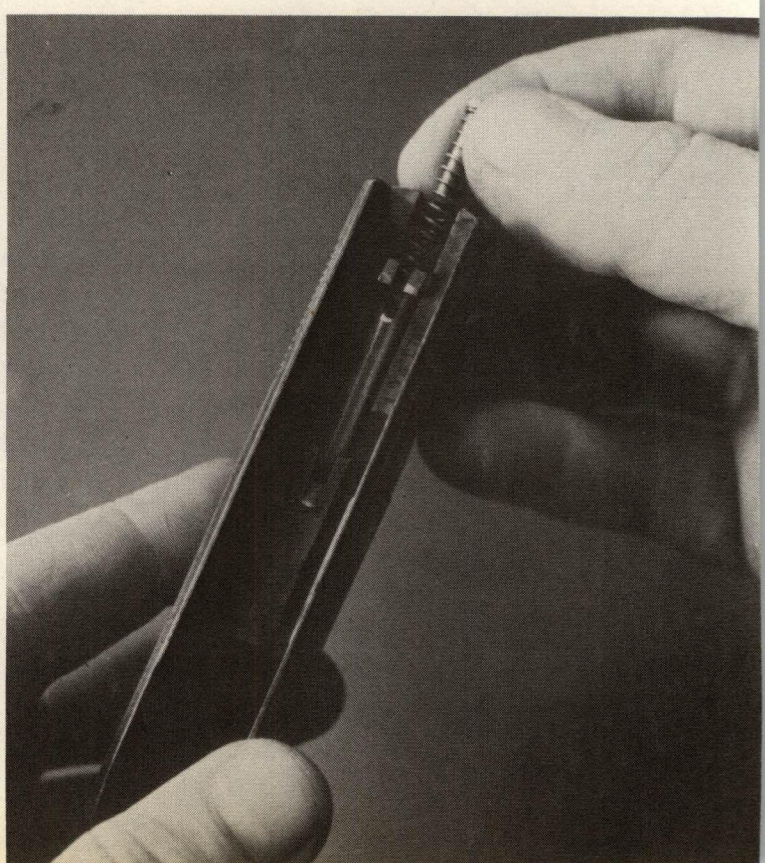
This pistol was first made in small quantity by the inventor, Heinrich Ortgies, but most of the production was by the Deutsche Werke in Erfurt. In addition to the 32-caliber version, which was the most popular, there was also an identical gun in 9mm Kurz (380 ACP), and some of those had an additional manual safety. A smaller version was chambered for the 25 ACP cartridge. The mechanical details of all of these pistols will be essentially the same, with the exception of the added safety on some 380 pistols.

Field Strip:

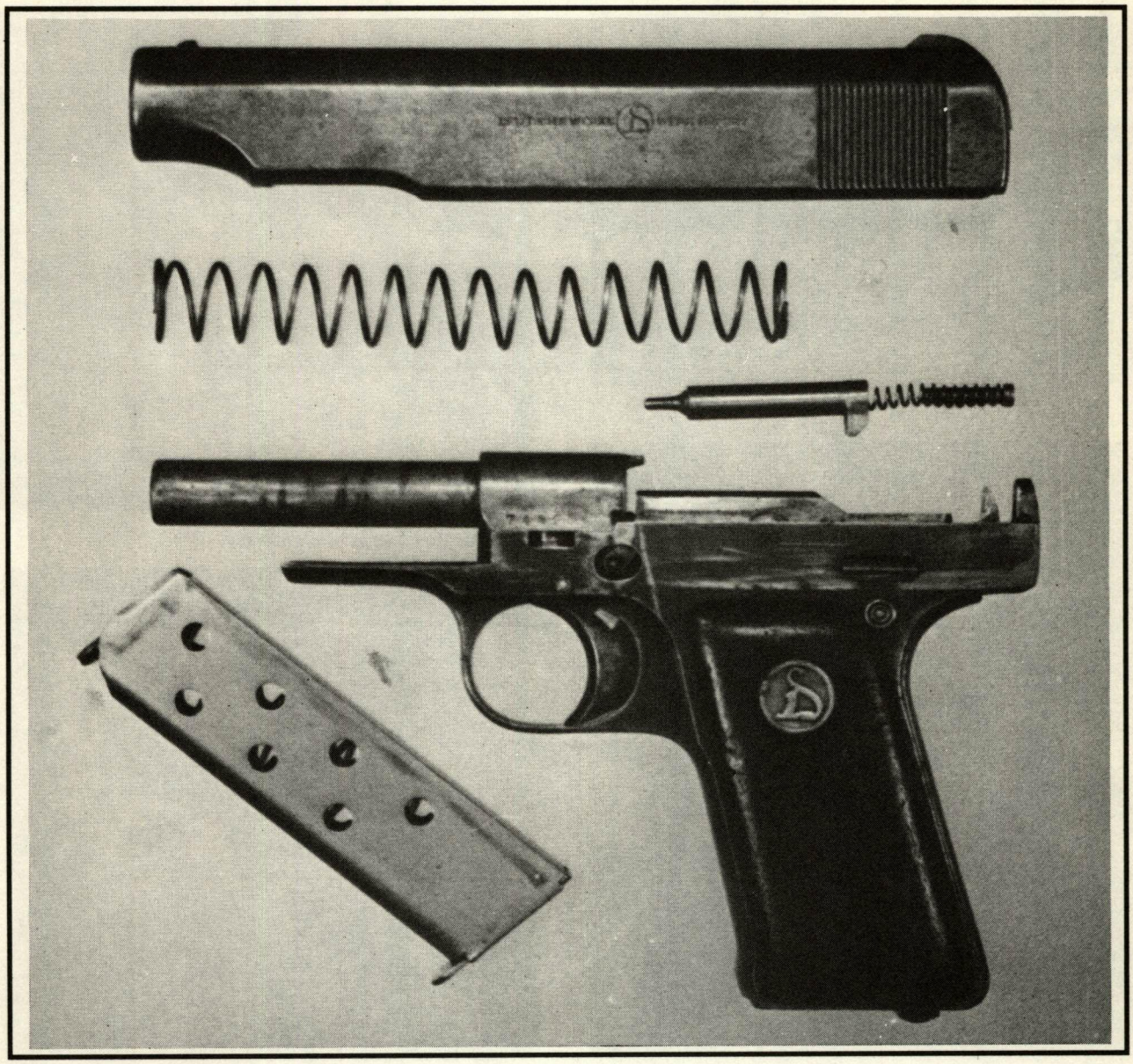
1. With the magazine removed and the striker in the fired position, move the slide $^{7}/_{16}$-inch to the rear, push the button at the left rear of the frame, and move the rear of the slide upward.



2. Run the slide forward off the frame and barrel.



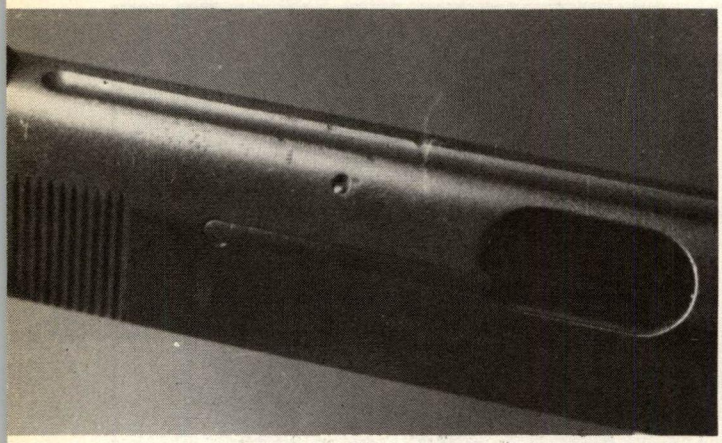
3. Move the striker back until the lug on its right side aligns with the exit track in the underside of the slide, and lift out the striker, spring, and follower. **Gun is now field-stripped.**



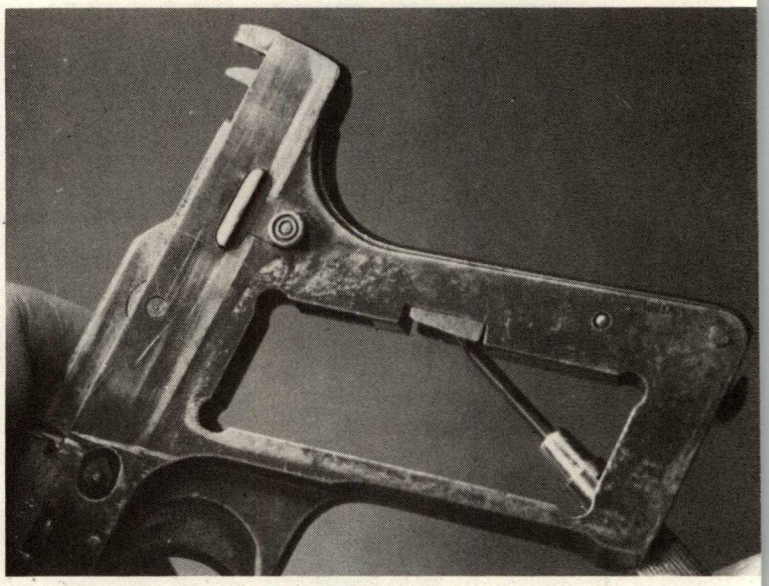
Ortgies field-stripped

Detail Strip:

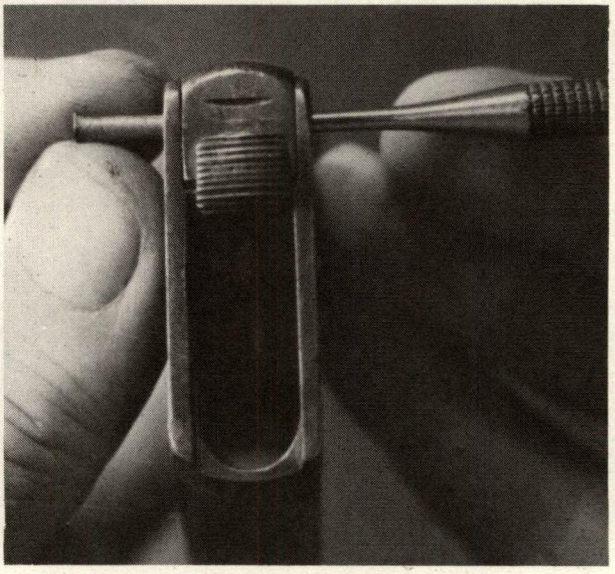
4. The extractor and its spring are retained in the slide by a vertical pin. The pin should be drifted out toward the bottom of the slide.



5. To remove the grips, insert a screwdriver into the magazine well, and press the grip retainer toward the rear, as shown. The grips are undercut at the front, so lift each panel at the rear while keeping the latch pressed in. Grips have been removed here to show the location of the retainer latch.

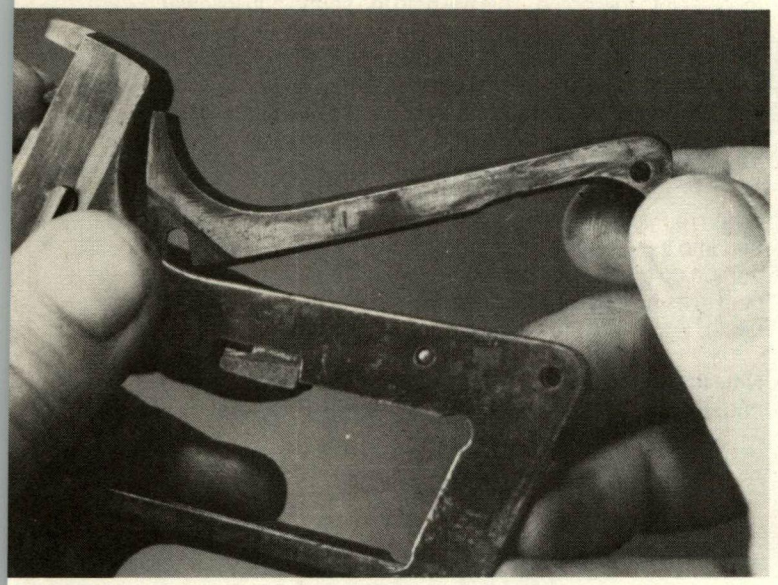


6. Turn the barrel straight out to the left, and lift it straight up off the frame. **Note:** Barrel may be tight, and may require a light rap with a nylon hammer to start it toward the left.

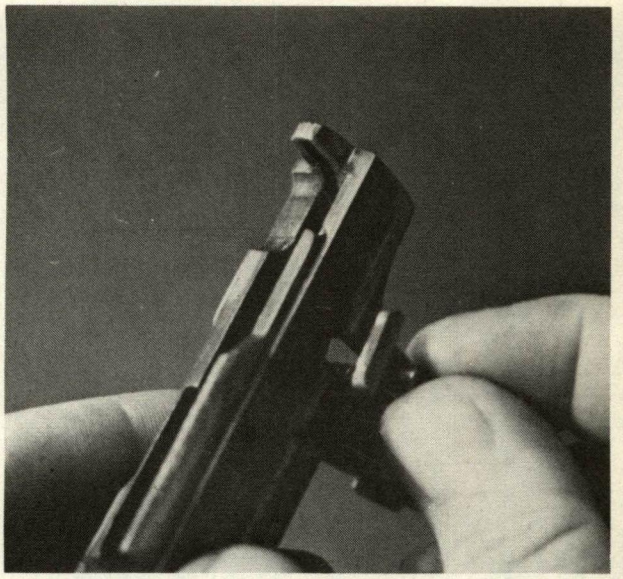


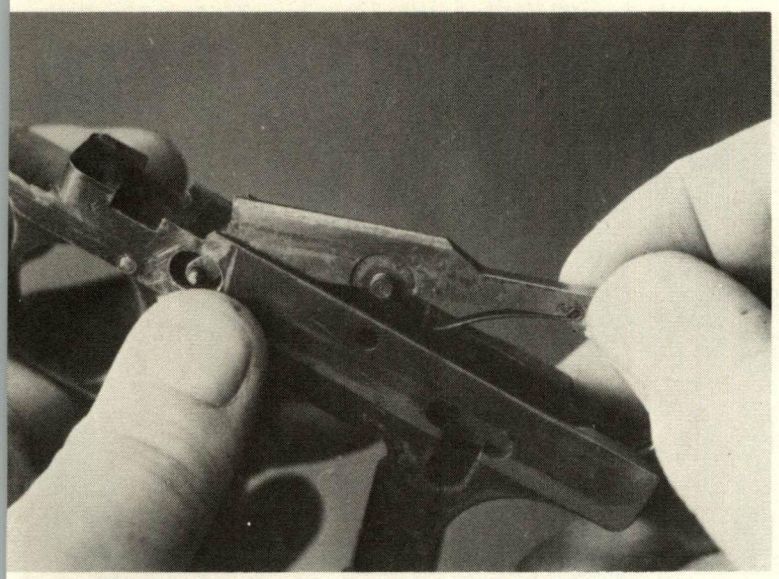
7. With a drift punch of the proper size, push out the large pin at the lower rear of the grip frame.

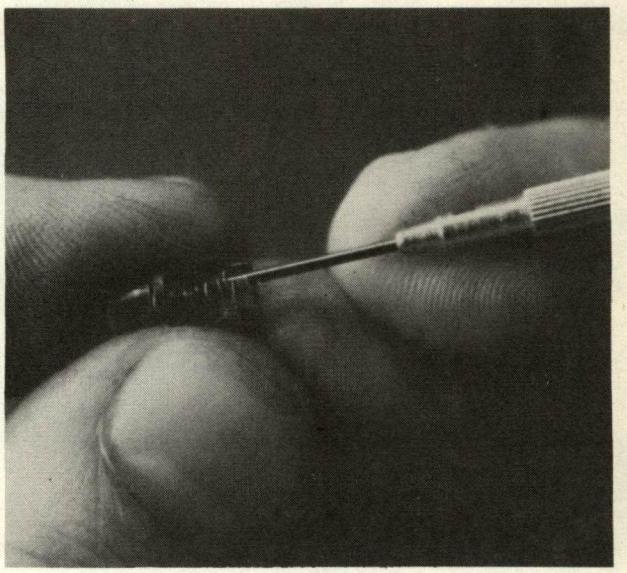
8. Remove the grip safety down and to the rear.



9. Taking out the grip safety will release the takedown/safety release button and its spring for removal toward the left.



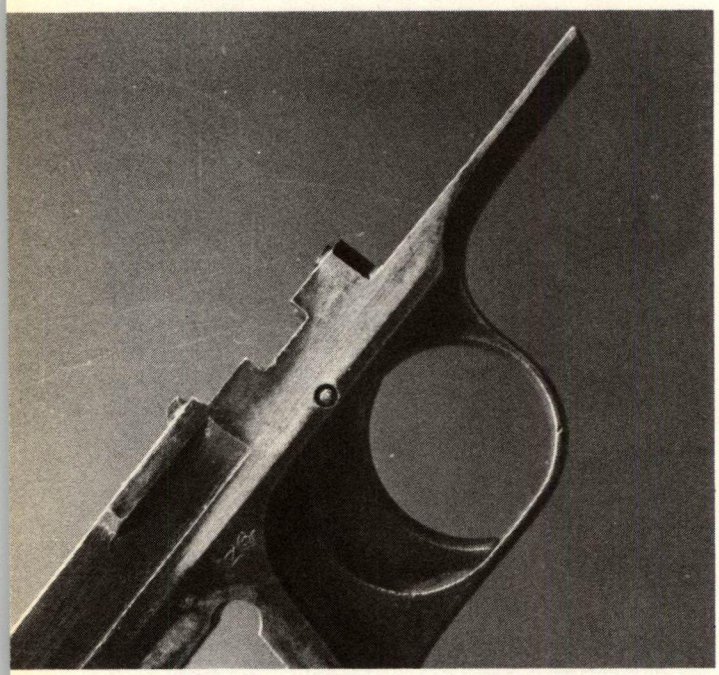


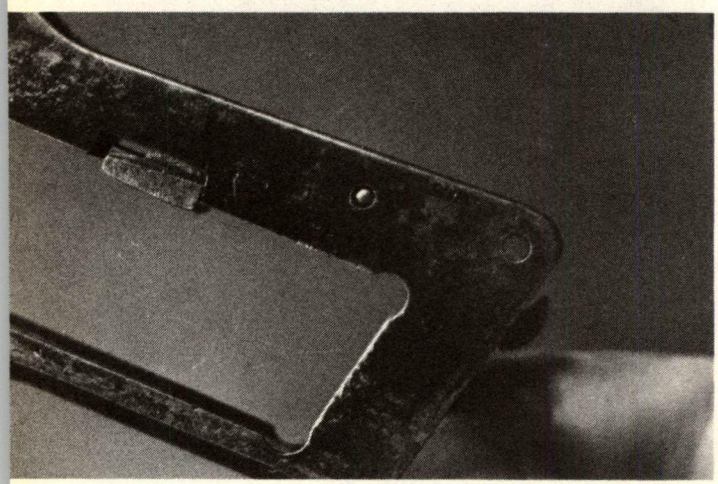


10. Move the sear/trigger bar in (to the right) to free its pivot stud from the hole in top left center of the frame, and lift out the bar toward the top. The sear spring is attached to the rear of the bar, and the disconnector and its spring are housed in the front.

11. Insert a small screwdriver into the end of the disconnector spring, and ease it upward from its recess for removal. The disconnector can now be moved out of its hole and taken out. The disconnector and its spring are rather small, so take care that they are not lost.

12. The trigger is retained by a cross-pin. After removing the pin, the trigger is turned down, into the trigger guard, for removal. The trigger spring and its plunger will come out with the trigger.





13. The smaller of the two cross-pins in the back of the grip frame retains both the magazine catch and the grip retainer, and their common spring.

Reassembly Tips:

About midway in the firing pin (striker) channel in the inside top of the slide there is an angled notch. After the firing pin is installed, and before the slide is put back on the frame, use a tool to compress the striker spring and move its follower into this notch. This will hold the spring and follower out of the way during replacement of the slide. **Caution:** *While handling the slide during installation on the frame, keep a fingertip over the rear opening of the striker channel in case the striker spring follower slips from its notch. While the striker spring follower is in its detent notch, take care to keep the rear of the slide aimed away from your face.*

When replacing the trigger bar in the frame, put the forward end into its well above the trigger first, then move the rear portion down into the frame and to the left to seat the pivot stud in its hole. It may be necessary to depress the disconnector when inserting the front part of the bar.

Note that the recoil spring is of larger diameter at its forward end. Be sure that end is toward the muzzle in reassembly.

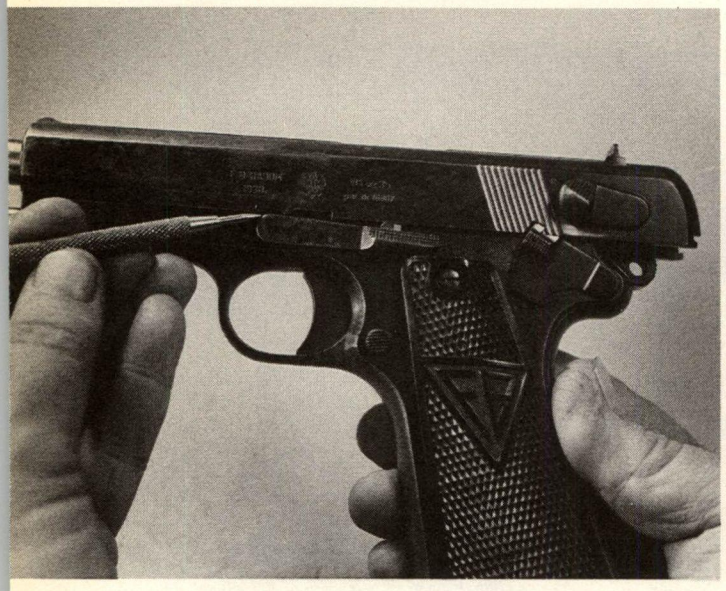
Radom P-35

Data:	Radom P-35
Origin:	Poland
Manufacturer:	Fabryka Broni, Radom
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	8 rounds
Overall length:	8 inches
Height:	$5^{5}/_{8}$ inches
Barrel length:	$4^{3}/_{4}$ inches
Weight:	39 ounces

We have chosen to refer to this venerable Polish sidearm as the Radom, because that's the name best-known by most shooters and collectors. Its official names were "VIS" and P-35, the latter indicating its year of adoption by the army of Poland. Late Nazi-occupation pistols may lack the takedown-latch, and they may have roll pins rather than solid cross-pins. Otherwise, they are mechanically the same.

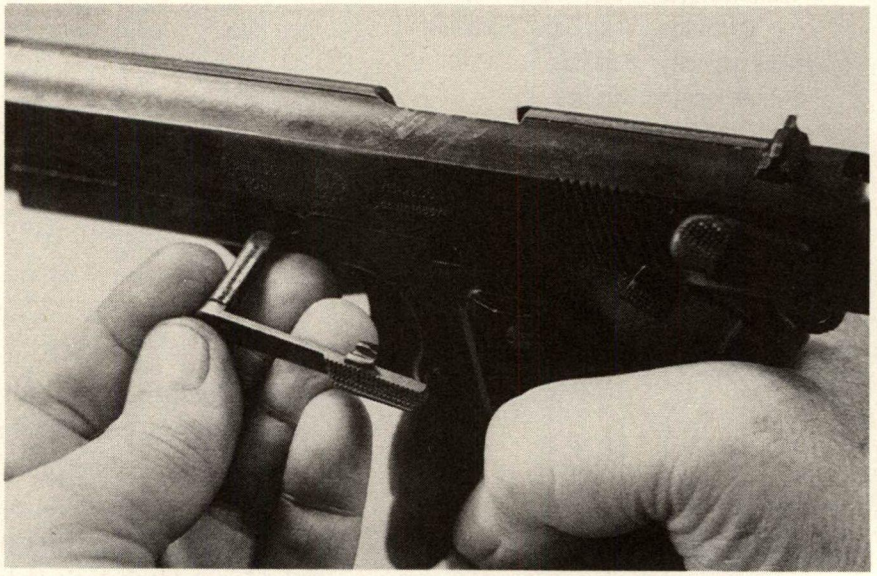
Field Strip:

1. With the magazine removed and the hammer cocked, draw the slide back and engage the disassembly latch. If the pistol is of wartime manufacture and lacks the latch, position the slide to align the semi-circular cut in its lower edge with the front of the slide latch.

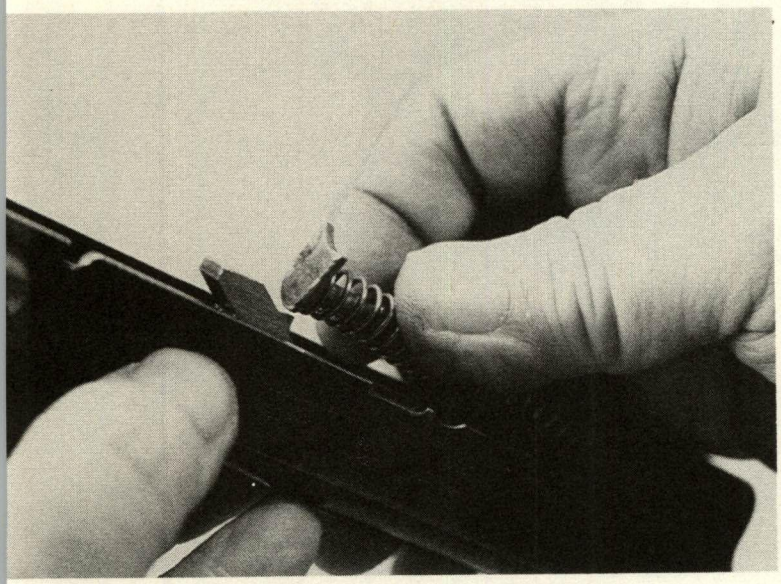


2. Pull the recoil spring guide forward, and push on the right tip of the slide-latch cross-shaft, to start the latch out of the frame.

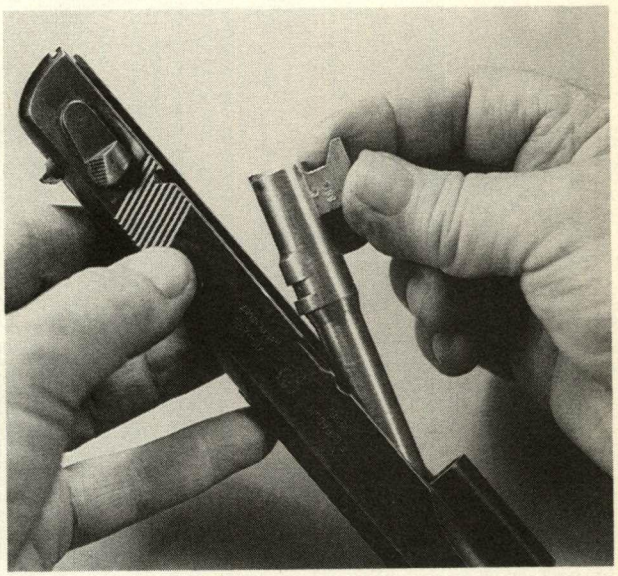
3. Remove the slide-latch toward the left.



4. Release the slide (restrain it) by turning the disassembly latch downward, and remove the slide assembly toward the front.



5. Turn the recoil spring unit to the position shown, and remove it from the underside of the slide.

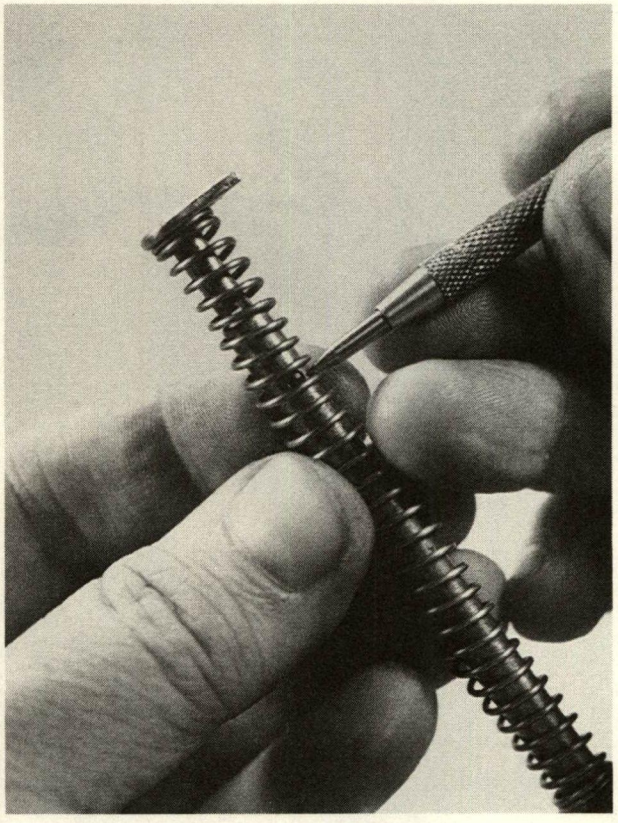


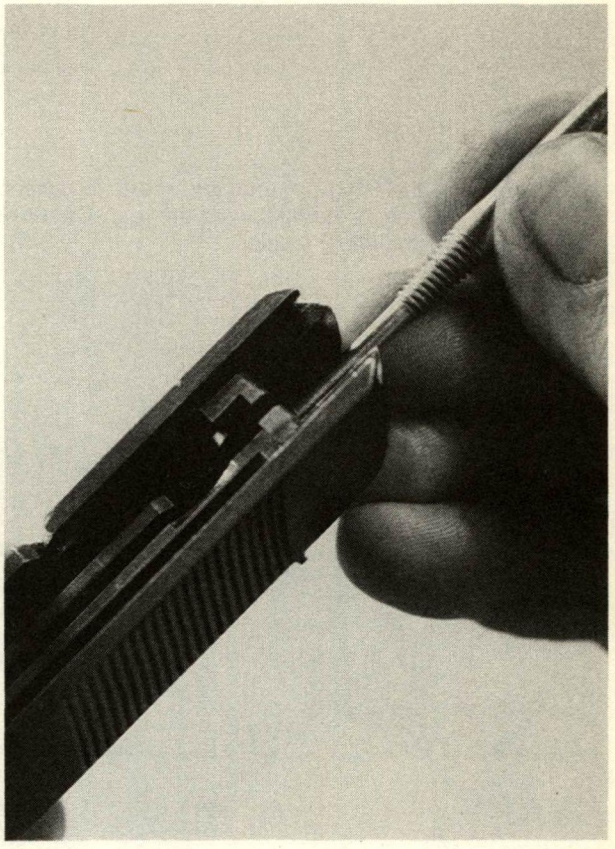
6. Remove the barrel from the underside of the slide. **Gun is now field-stripped.**

Radom P-35 field-stripped

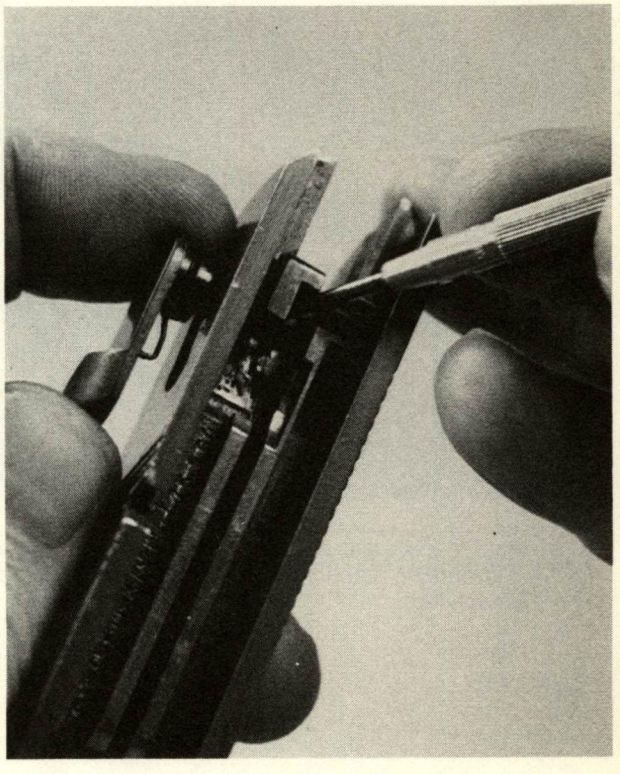
Detail Strip:

7. The recoil spring unit may be disassembled by drifting out a cross-pin—actually, with the rear plunger depressed, it is pushed out—but as the plunger shaft is deeply slotted at its center, it is subject to breakage. Unless replacement of the recoil spring, the plunger, or its spring is necessary, it is best to leave this assembly intact. If it is disassembled, take care that the collar or bushing at the front of the recoil spring is not lost.



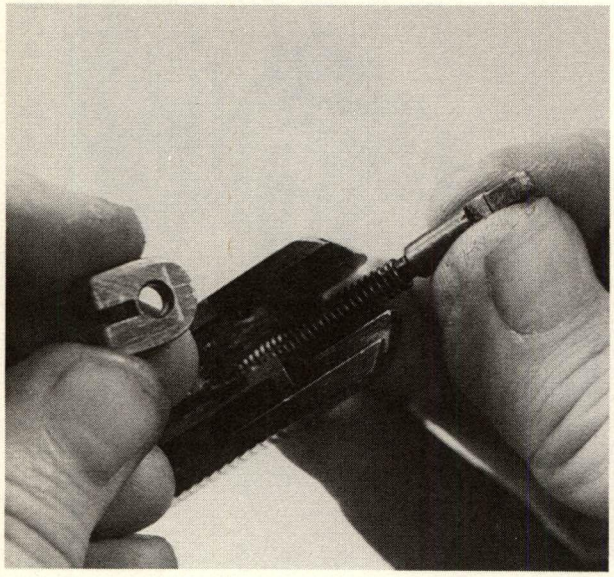


8. Fully depress the firing pin, and move the firing pin retainer slightly downward, until its front projection clears the flange of the hammer-drop lever.

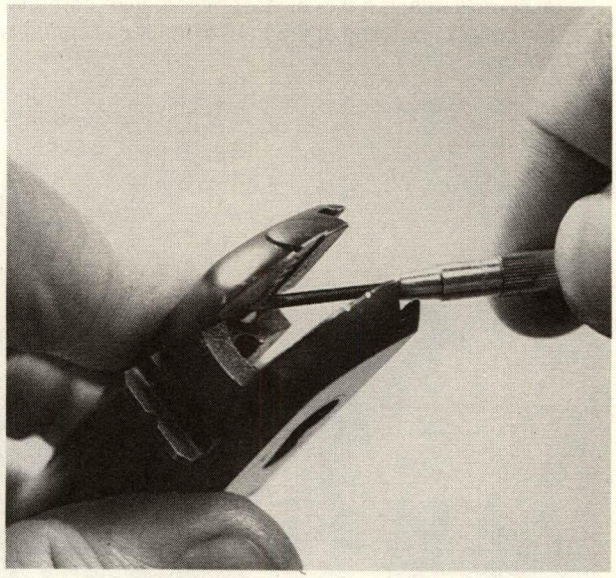


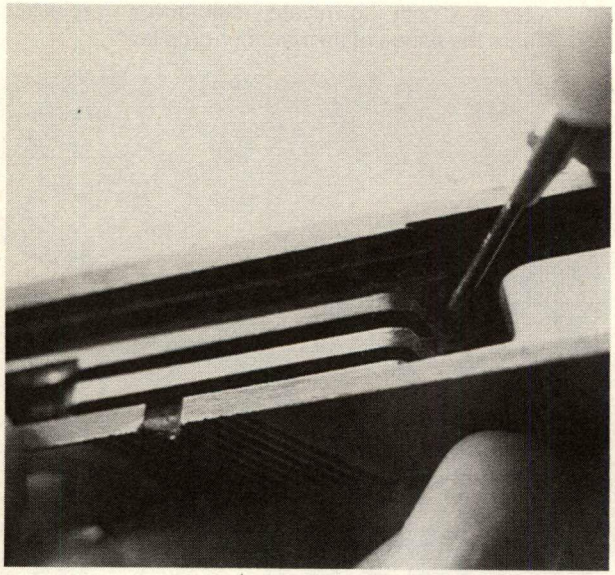
9. Use a tool to nudge the hammer-drop lever out toward the left. The lever spring is easily detached, if necessary.

10. Remove the firing pin retainer, and take out the firing pin and its spring toward the rear. **Caution:** *The spring is under tension.*

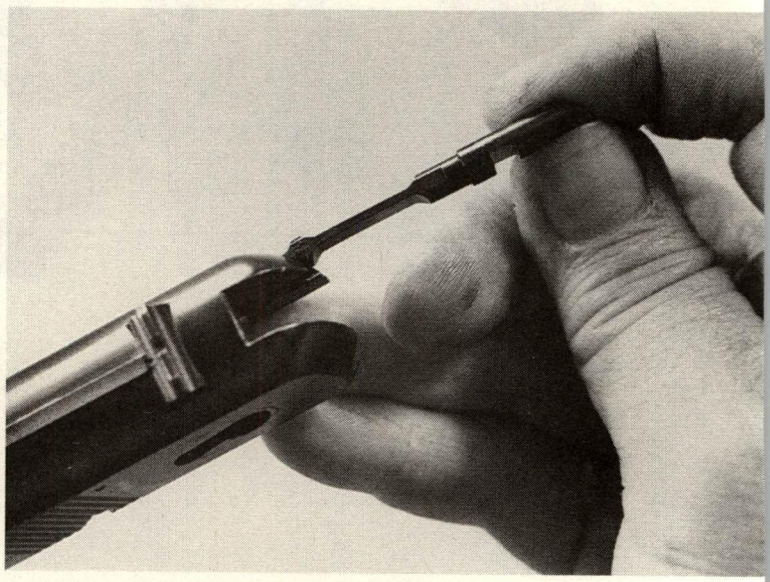


11. Use a small tool to gently pry the extractor slightly toward the rear. It will stop when its forward beak reaches the breech face.



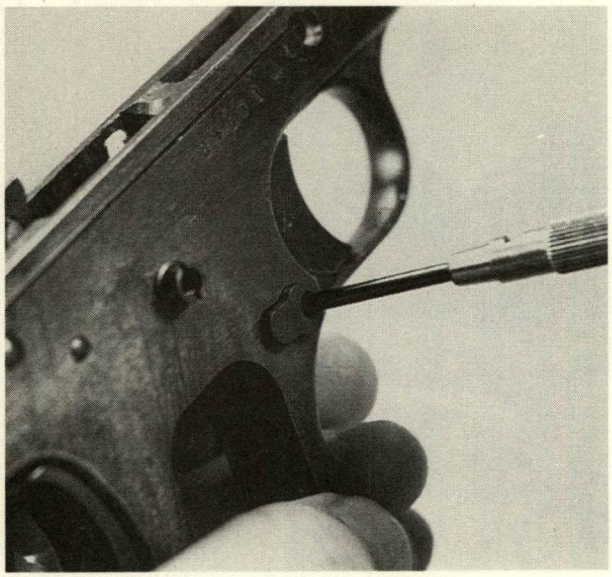


12. Push the extractor beak toward the right and nudge it toward the rear after it is clear of the edge of the breech face.

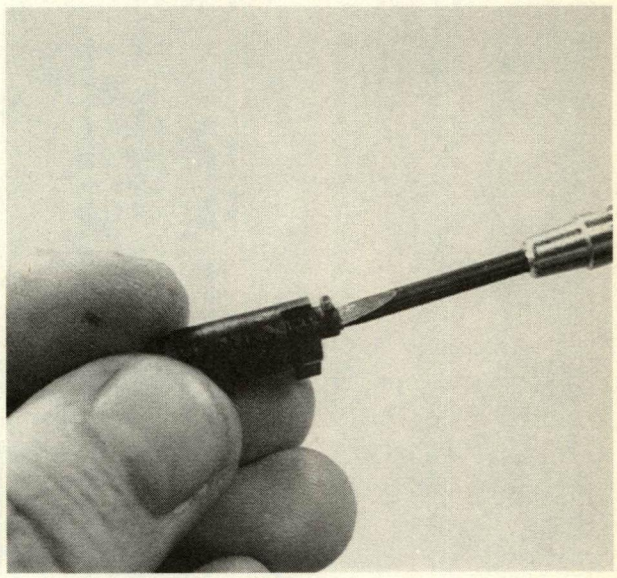


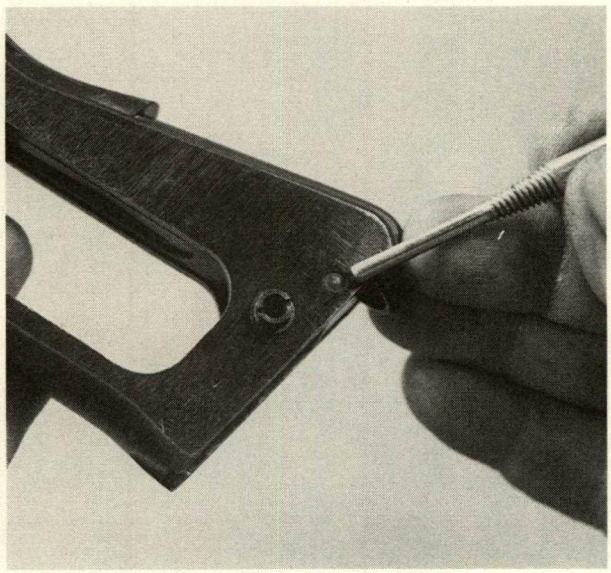
13. Remove the extractor toward the rear.

14. Fully depress the magazine catch, and turn the screw-slotted head of the retainer counterclockwise until it stops. Remove the magazine catch assembly toward the right.

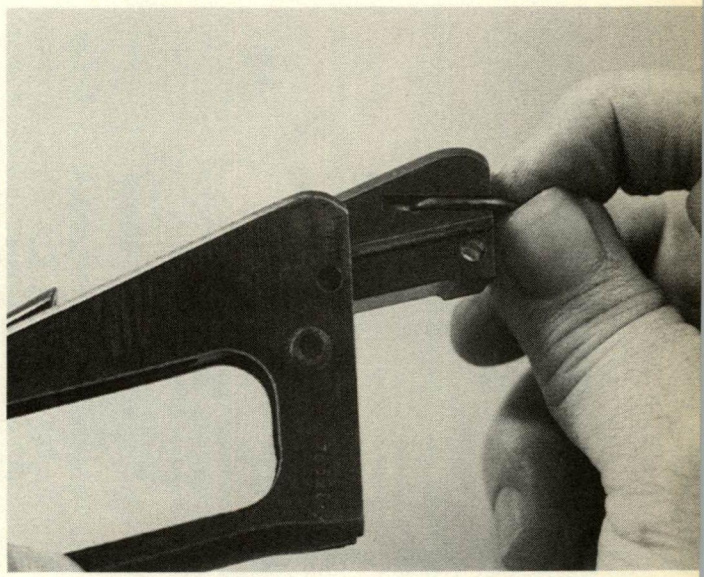


15. The catch assembly can be taken apart by turning the retainer clockwise, and easing out the retainer and spring. **Caution:** *The spring is under tension.*



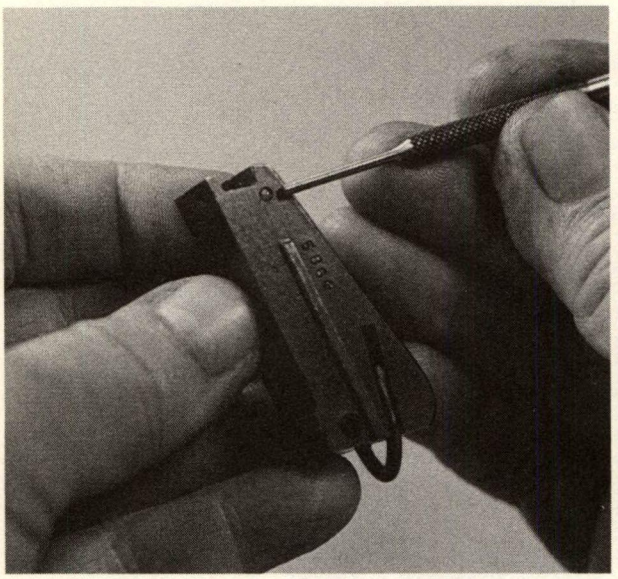


16. With the hammer in the fired position, drift out the cross-pin at the lower rear of the grip frame.

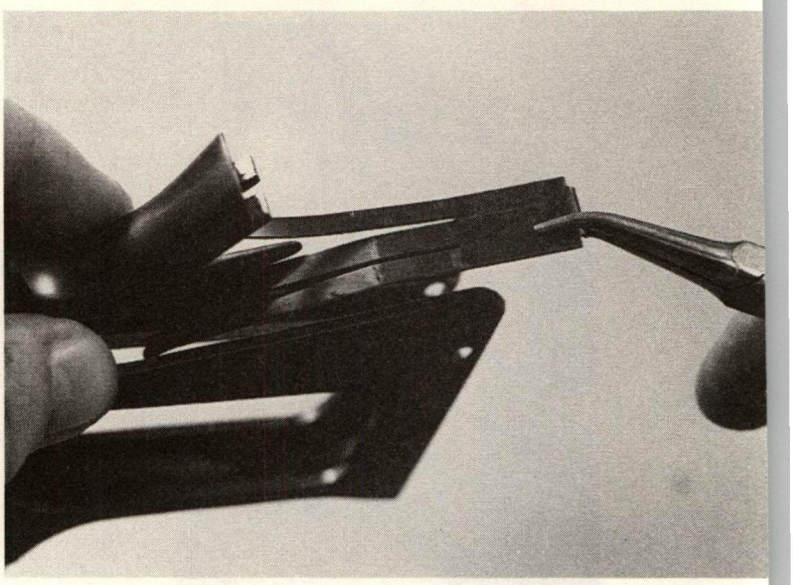


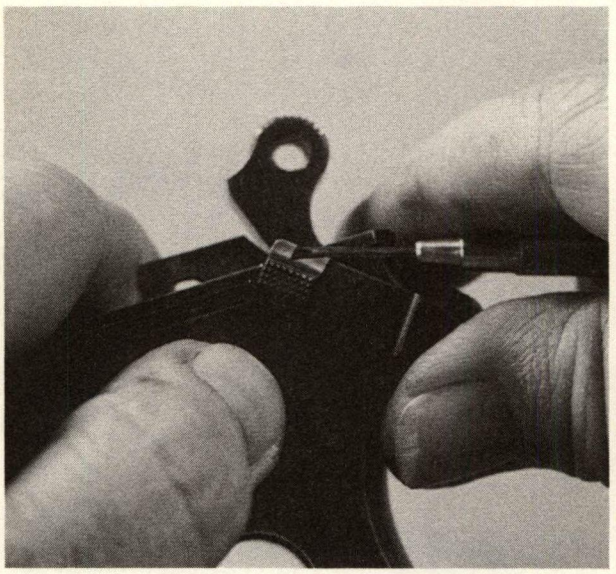
17. Remove the mainspring housing downward.

18. The spring and plunger can be removed from the housing by gripping the housing in a padded vise, depressing the plunger, and pushing out the small pin near the top of the housing. **Caution:** *This powerful spring is under tension, so control it.*



19. The combination sear, disconnector, and grip safety spring can be taken out downward at this point.

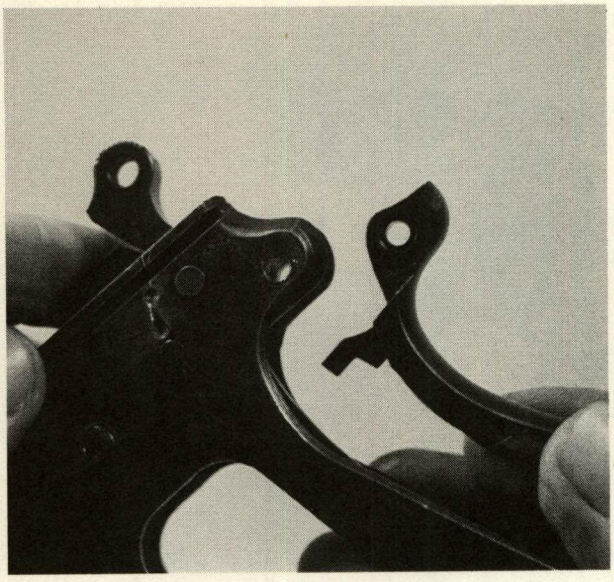




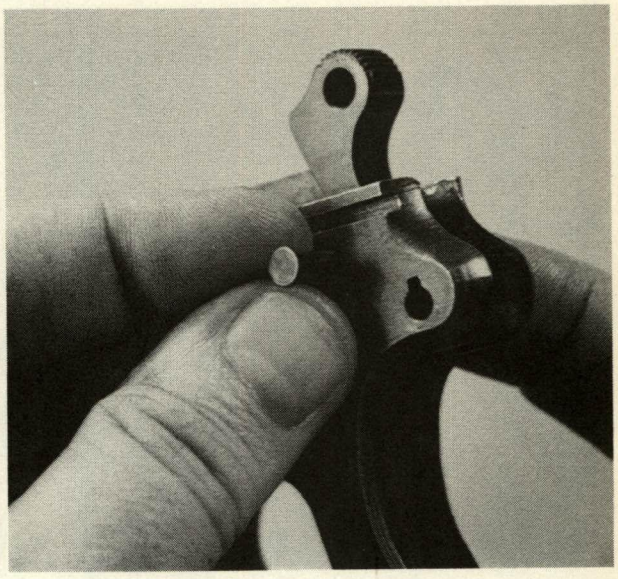
20. Turn the takedown-latch to its uppermost position, and insert a tool to spring it slightly outward while continuing to turn it upward.

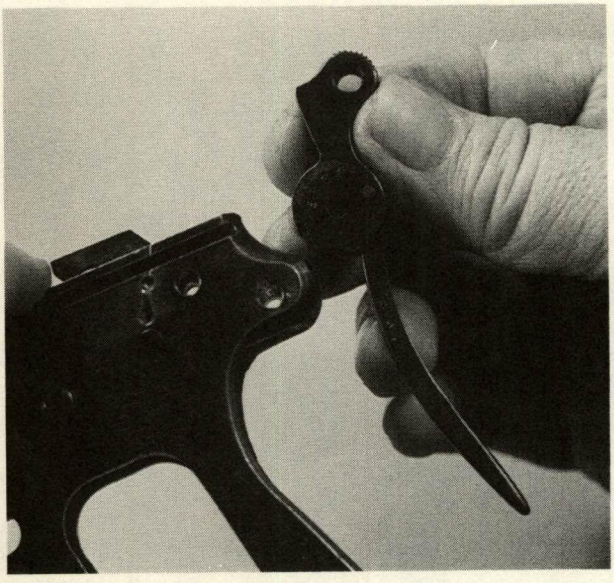
21. Turn the takedown-latch to the position shown, and remove it toward the left.

22. Remove the grip safety toward the rear.

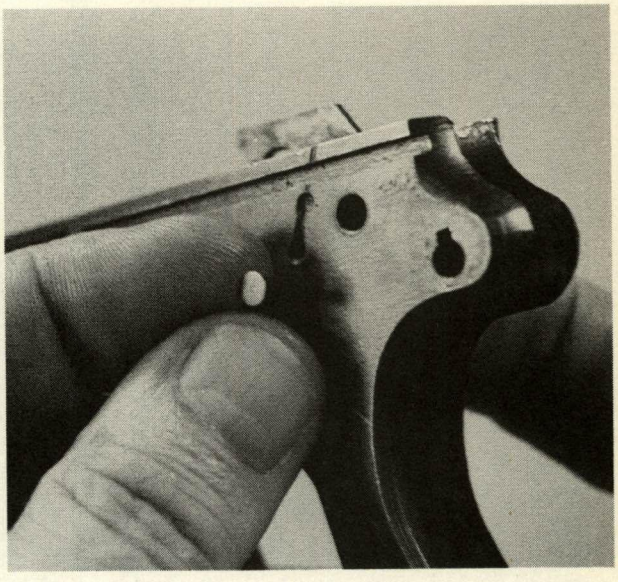


23. Remove the hammer pivot pin toward the left.



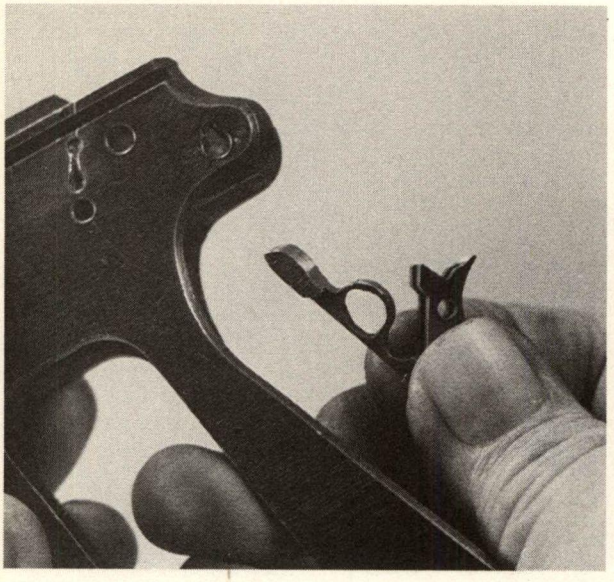


24. Remove the hammer assembly toward the rear. The strut can be taken off by drifting out the pin.

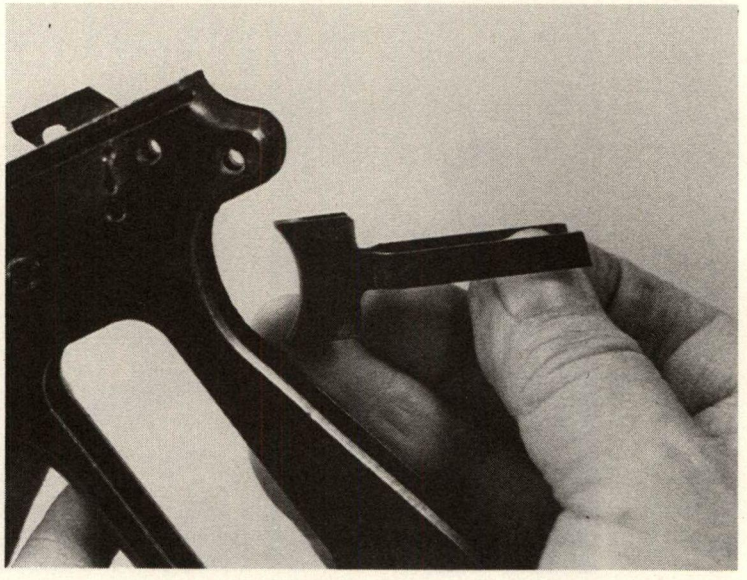


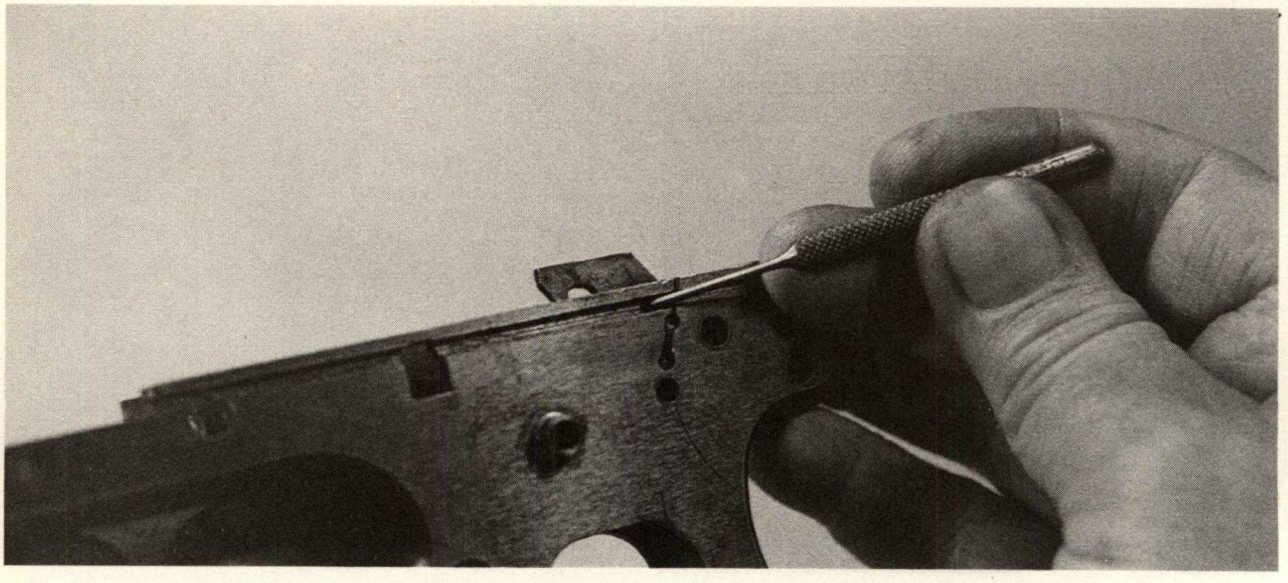
25. Remove the sear and disconnector pin toward the left.

26. Remove the sear and disconnector downward and toward the rear.



27. Remove the trigger rearward and downward.

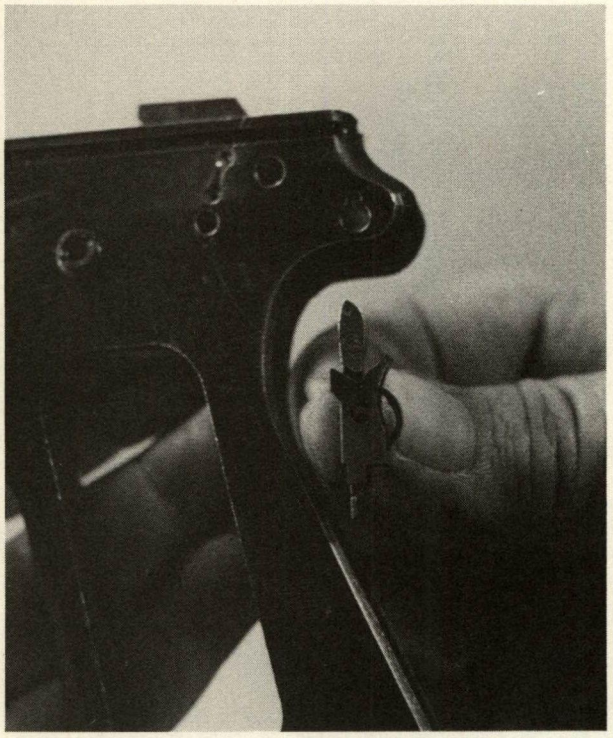




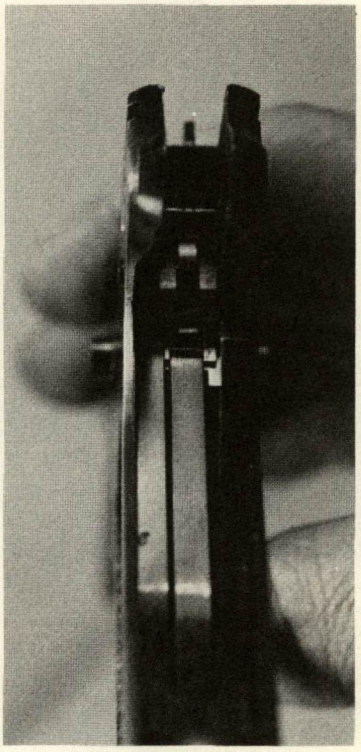
28. The ejector is retained by a cross-pin that is barely visible in the slide track. Unless repair is necessary, it is best to leave it in place. If removal must be done, the extractor is taken off upward, after the pin is driven out.

Reassembly Tips:

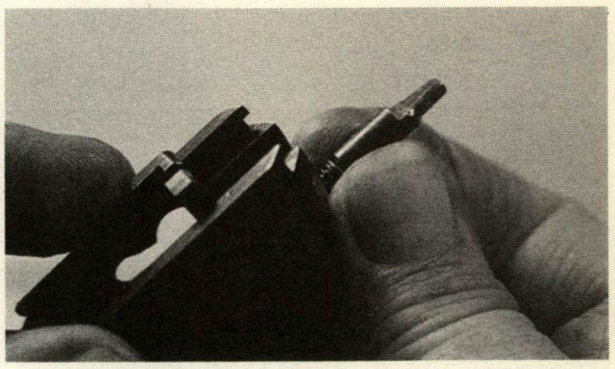
1. The disconnector and sear are shown here in the proper relationship for reassembly.



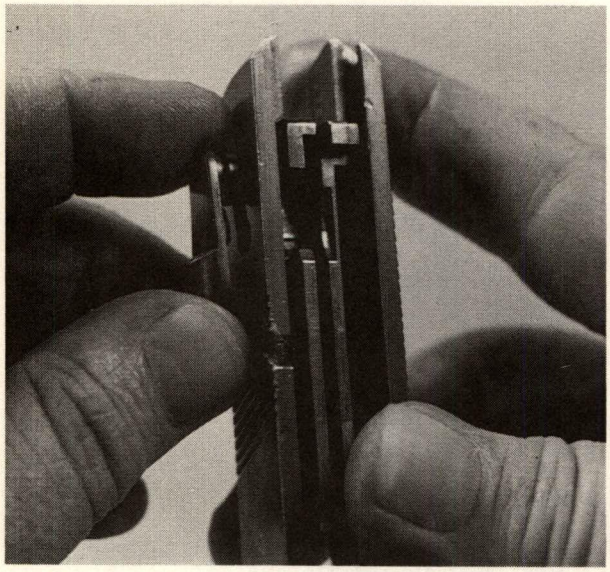
2. Be sure the left arm of the combination spring engages the sear, and the center arm the slope of the disconnector. When the lower tip of the spring is in its slot in the frame, sliding the mainspring housing in part-way will hold it in place.



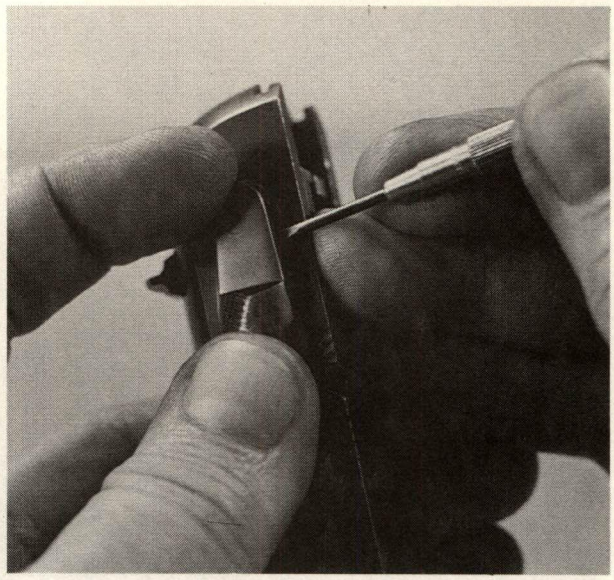
3. When replacing the firing pin, remember that the flat portion at the rear must be toward the bottom of the slide.



4. Remember that the firing pin retainer is first pushed in just far enough to hold the firing pin, and is not fully seated until the hammer-drop lever is installed.



5. When the hammer-drop lever is almost in place, insert a small tool to engage the lever spring with its shoulder in the slide.



6. Reinsertion of the slide-latch is made easier by pulling forward on the recoil spring guide.

Raven MP-25

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Raven MP-25 also apply to the following gun.

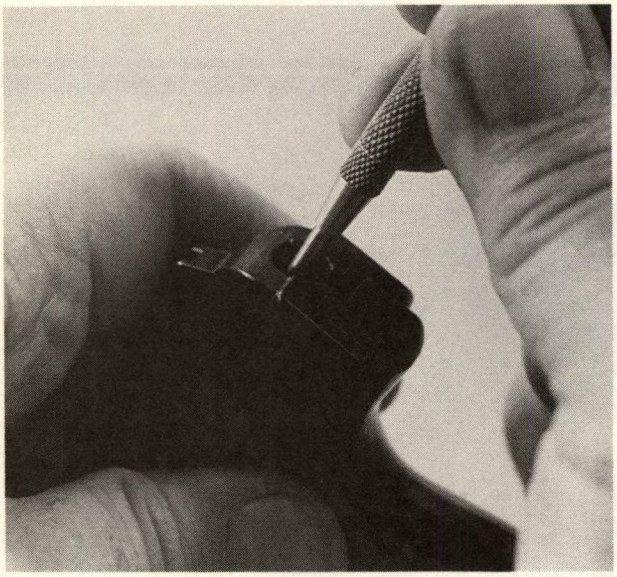
Raven P-25

Data:	Raven MP-25
Origin:	United States
Manufacturer:	Raven, Industry, California
Cartridge:	25 ACP
Magazine capacity:	6 rounds
Overall length:	$4^{3}/_{4}$ inches
Height:	$3^{3}/_{8}$ inches
Barrel length:	$2^{7}/_{16}$ inches
Weight:	15 ounces

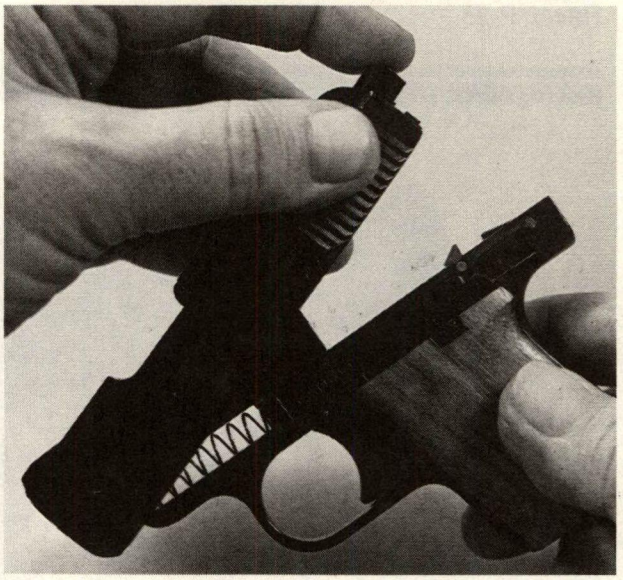
The Raven pistol has long been known as one of the most reliable of the low-priced 25-caliber automatics. The original P-25 Raven had a sliding safety with a large button, and the off-safe movement was toward the rear. Early MP-25 pistols had a sliding safety with a small serrated tab, and off-safe direction was forward. The current production MP-25 pistols have a disc-shaped rotating safety with a downward off-safe movement. Other than the safety, there have been no mechanical changes. The instructions will apply for all three versions.

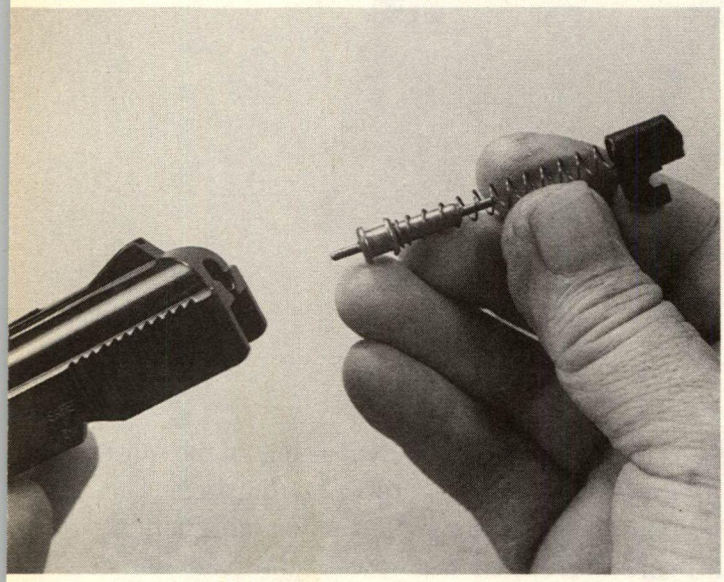
Field Strip:

1. With the magazine removed and the striker in the fired position, use a fingertip or non-marring tool to depress the retainer at the rear of the slide, and lift the slide upward at the rear. **Caution:** *The retainer is under tension from the striker spring, so keep it under control.*

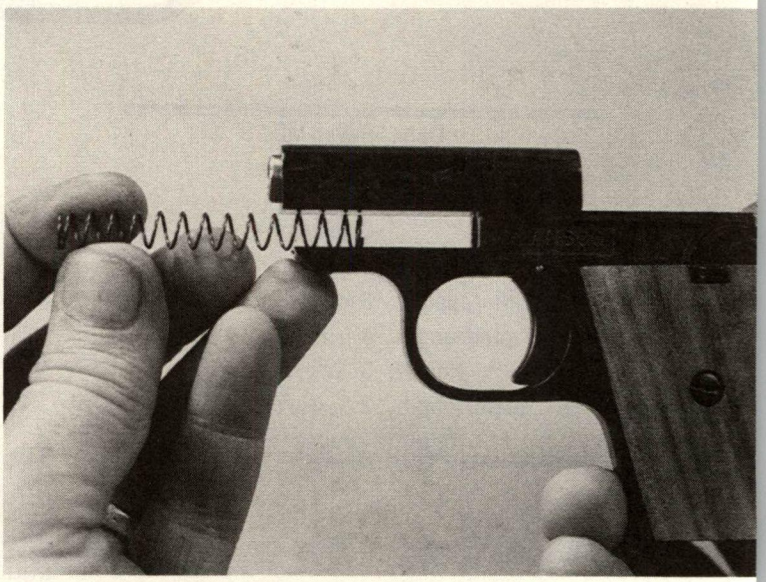


2. Lift the slide until the underside of the breechblock clears the barrel, and move the slide assembly forward off the frame.

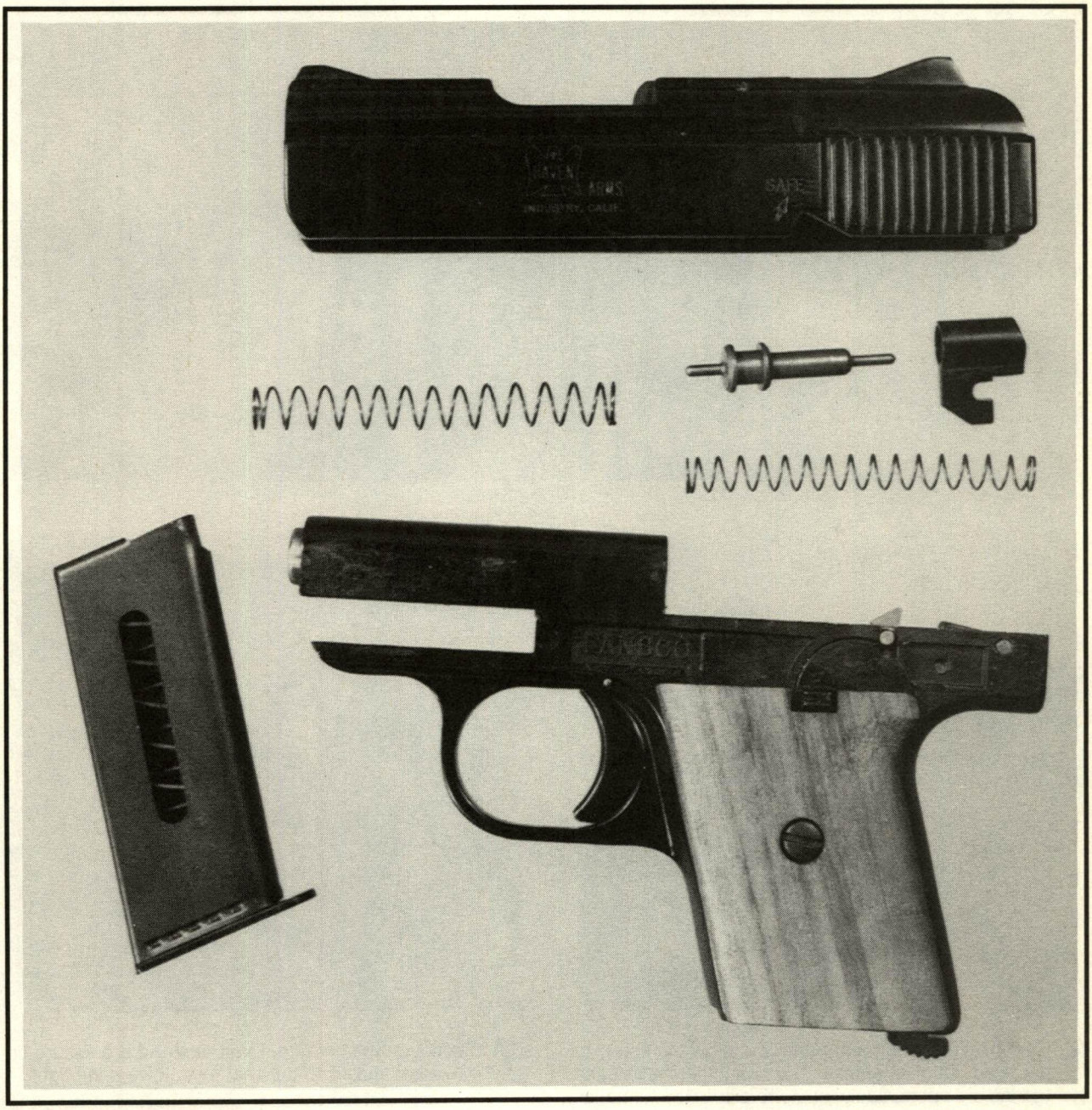




3. Remove the retainer, striker spring, and striker toward the rear.



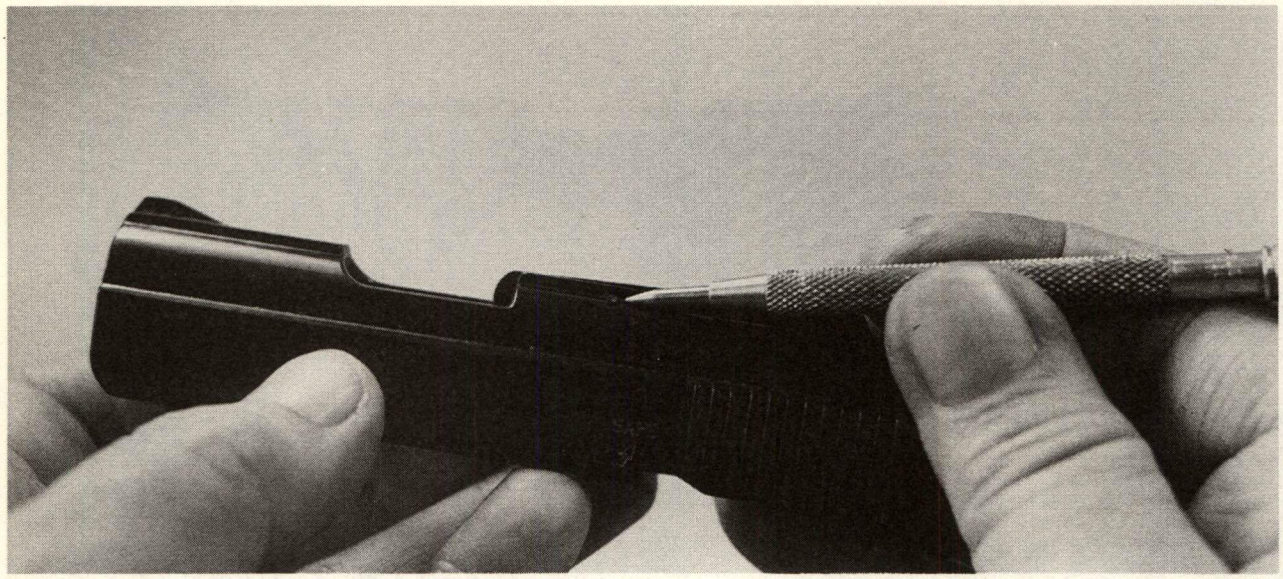
4. Remove the recoil spring toward the front. **Gun is now field-stripped.**

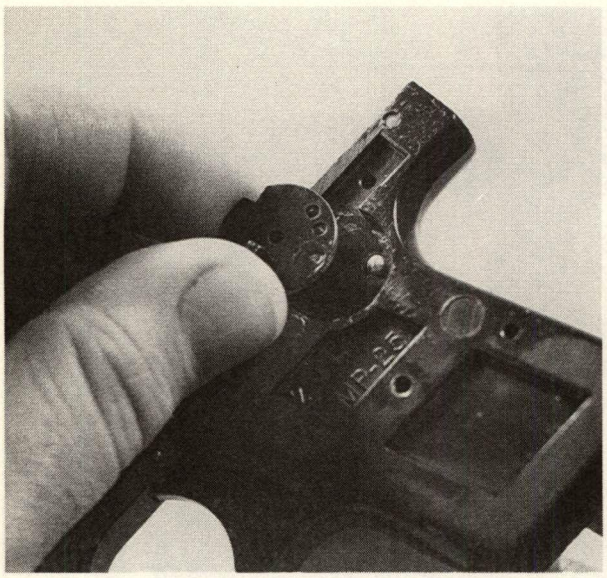


Raven MP-25, field-stripped

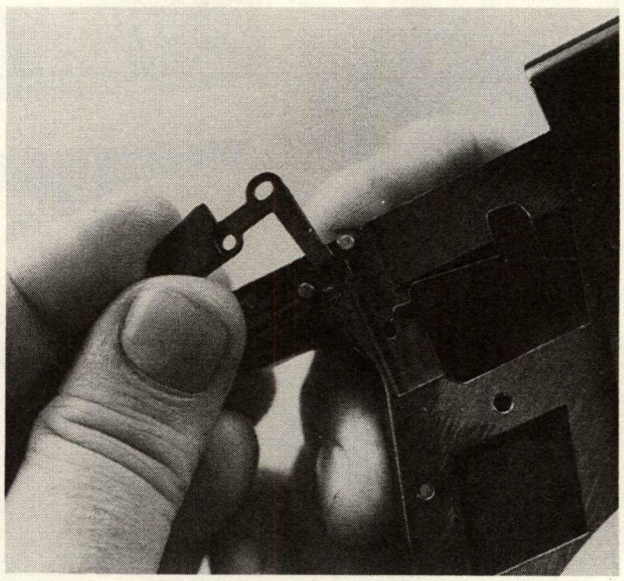
Detail Strip:

5. Driving out the horizontal cross-pin in the top of the slide toward the right will release the extractor and its spring for removal upward.



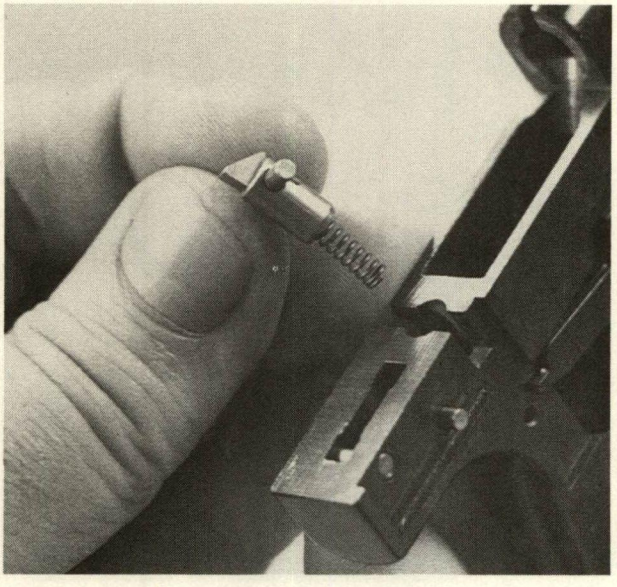


6. Removal of the left grip panel will allow the safety to be lifted out of its recess. The safety detent ball and spring are not routinely removable from the frame, as this system is staked in place at the factory.

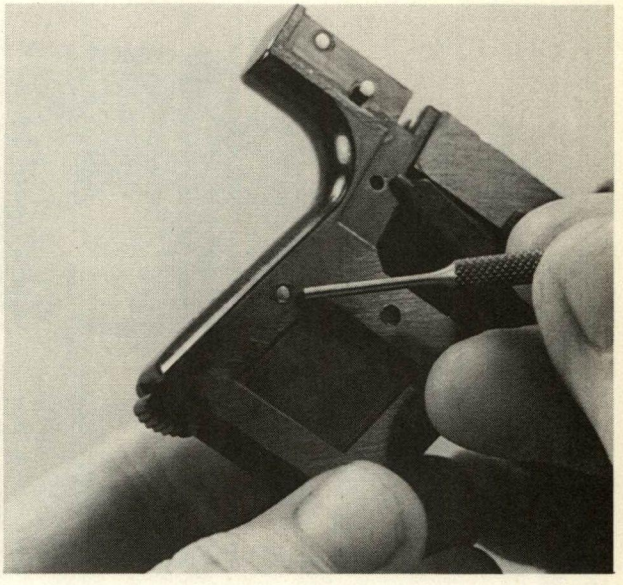


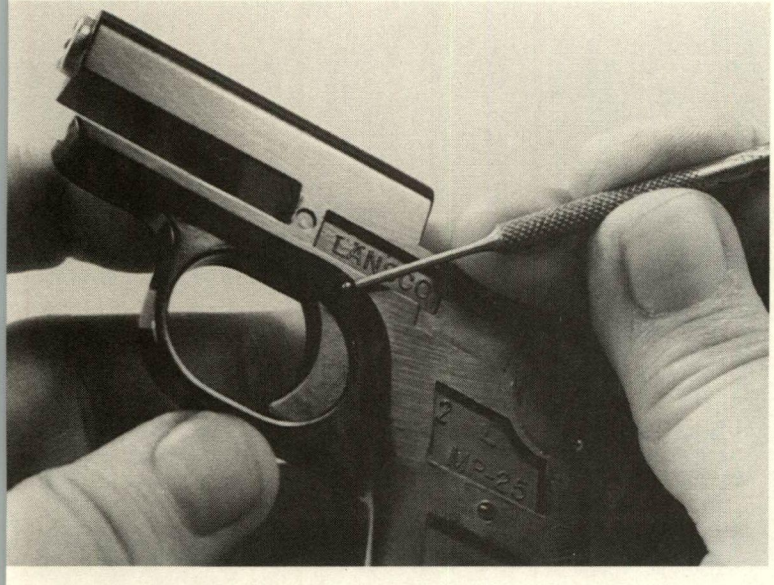
7. Remove the right grip. Exert downward pressure on the sear, and lift off the sear-lever toward the right.

8. Slowly release the pressure on the sear, and remove the sear and its spring upward.

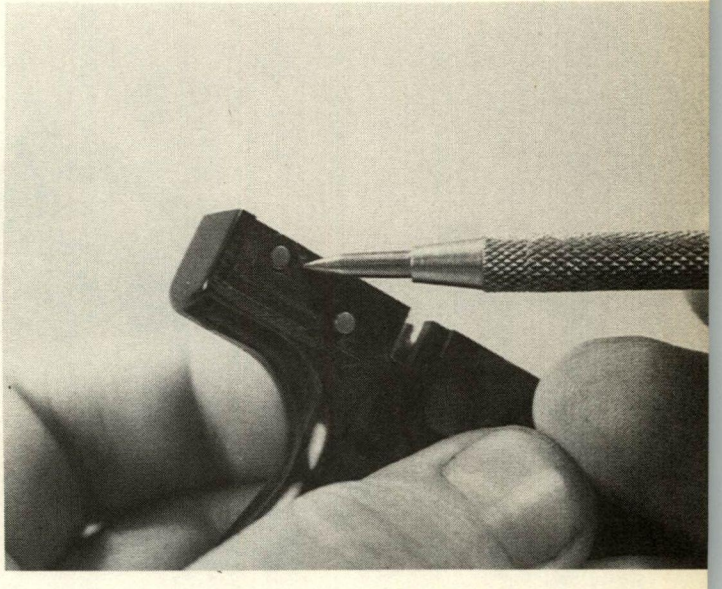


9. Drifting out the magazine catch pin toward the right will allow removal of the magazine catch and its spring downward.





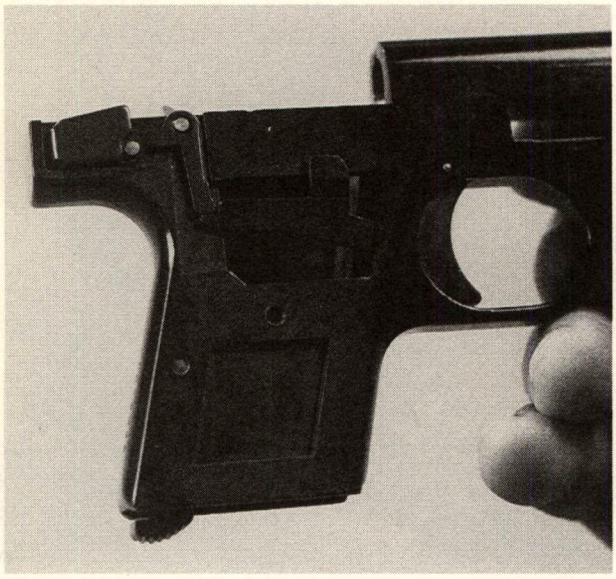
10. Drift out the trigger pin toward the right, and move the trigger assembly toward the rear, taking it out through the side opening of the frame toward the right. It will be necessary to flex the trigger bar slightly to clear. The trigger bar and its spring can be removed from the trigger by drifting out the small cross-pin, but in normal takedown these are best left in place.

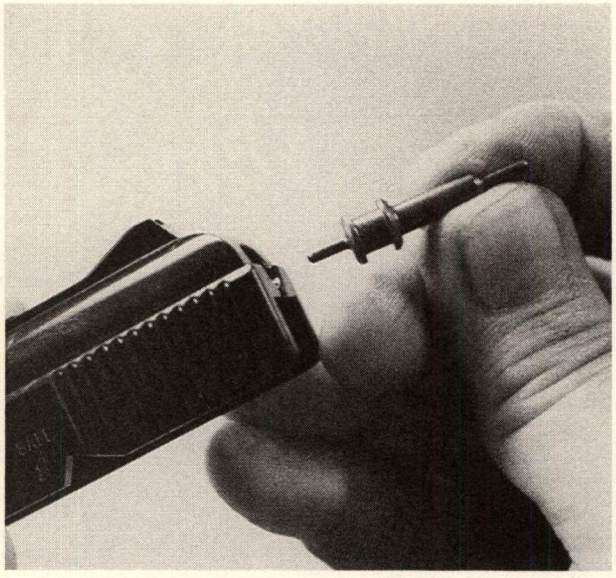


11. The cross-pin at upper rear is there to engage the retainer, and the other cross-pin is the pivot for the sear-lever. Neither retains any parts, and in normal takedown they are not removed.

Reassembly Tips:

1. The parts on the right side of the pistol are shown here in their proper relationship, before replacement of the grip panel.





2. Remember that the large end of the firing pin (striker), with the two "collars," goes toward the front.

Variations:

1. This is the sliding safety of the earlier MP-25 pistol.

2. The original Raven P-25 also had a sliding safety. Both types simply lift off when the grip panel is removed.

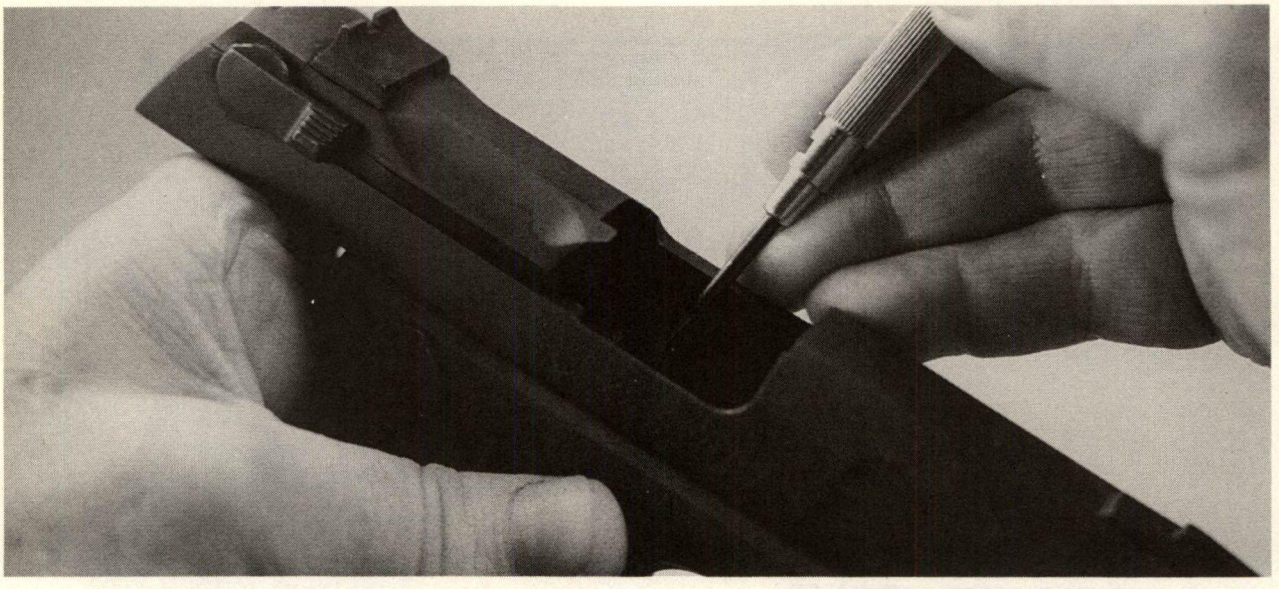
Ruger P-85

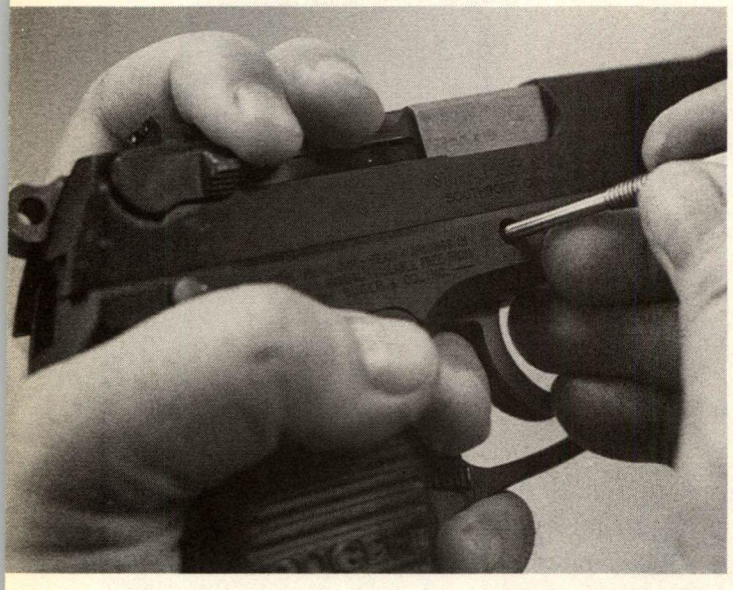
Data:	Ruger P-85
Origin:	United States
Manufacturer:	Sturm, Ruger & Co., Southport, Connecticut
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	15 rounds
Overall length:	7.84 inches
Height:	$5^{7}/_{8}$ inches
Barrel length:	$4^{1}/_{2}$ inches
Weight:	32 ounces

The long-awaited 9mm double-action pistol from Sturm, Ruger and Company finally arrived in good quantity in 1988, and soon confirmed its own testimony to Ruger reliability. Very early P-85 pistols had a larger slide-latch with a different shape, and a few other small differences. However there were no mechanical changes that would affect takedown or reassembly.

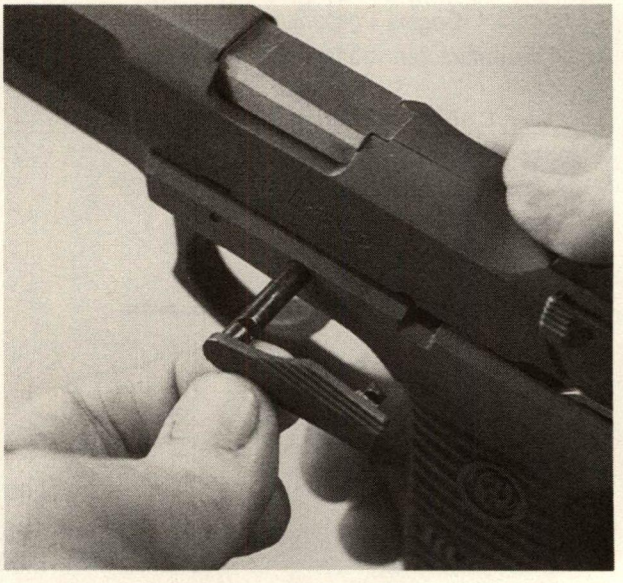
Field Strip:

1. Lock the slide in open position, and remove the magazine. Exert upward pressure on the slide-latch to insure that it isn't moved out of engagement. With a fingertip or tool, tip the ejector over forward into the magazine well. It will lock in that position.



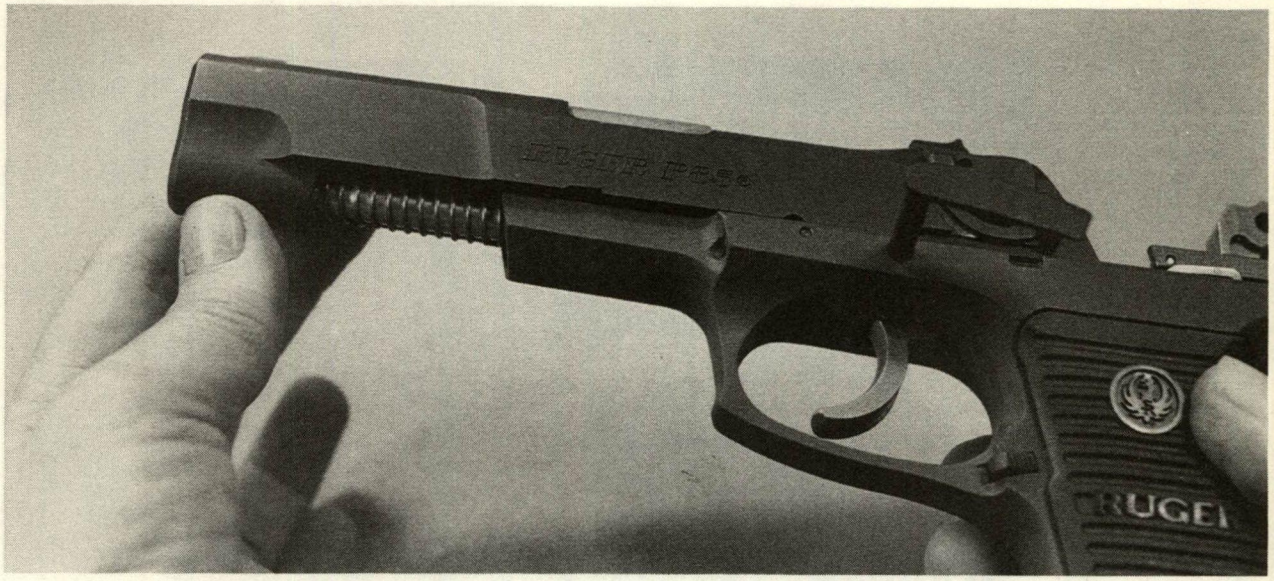


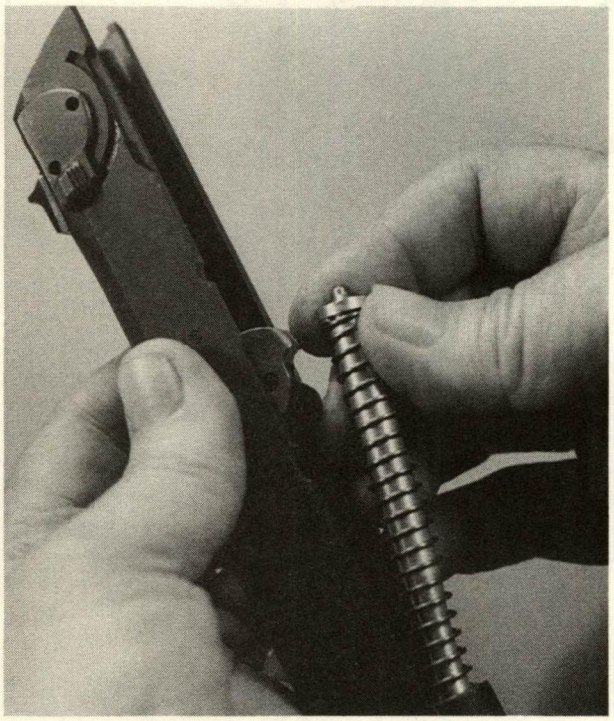
2. Restrain the slide, release the latch, and ease the slide forward. The hammer will fall to its fired position. Retract the slide about $^{1}/_{8}$-inch while exerting pressure on the right tip of the slide-latch, to start it out toward the left.



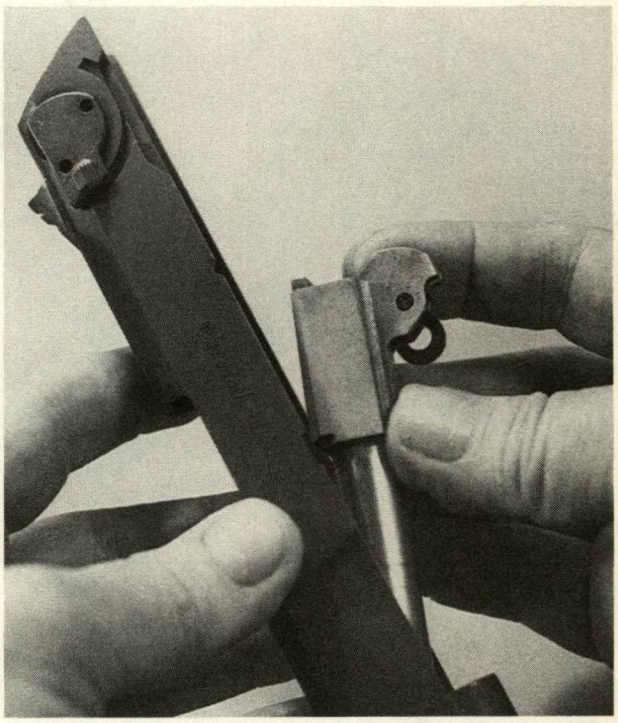
3. Pull the slide-latch out until it stops. It is not removed at this point.

4. Remove the slide and barrel assembly toward the front.

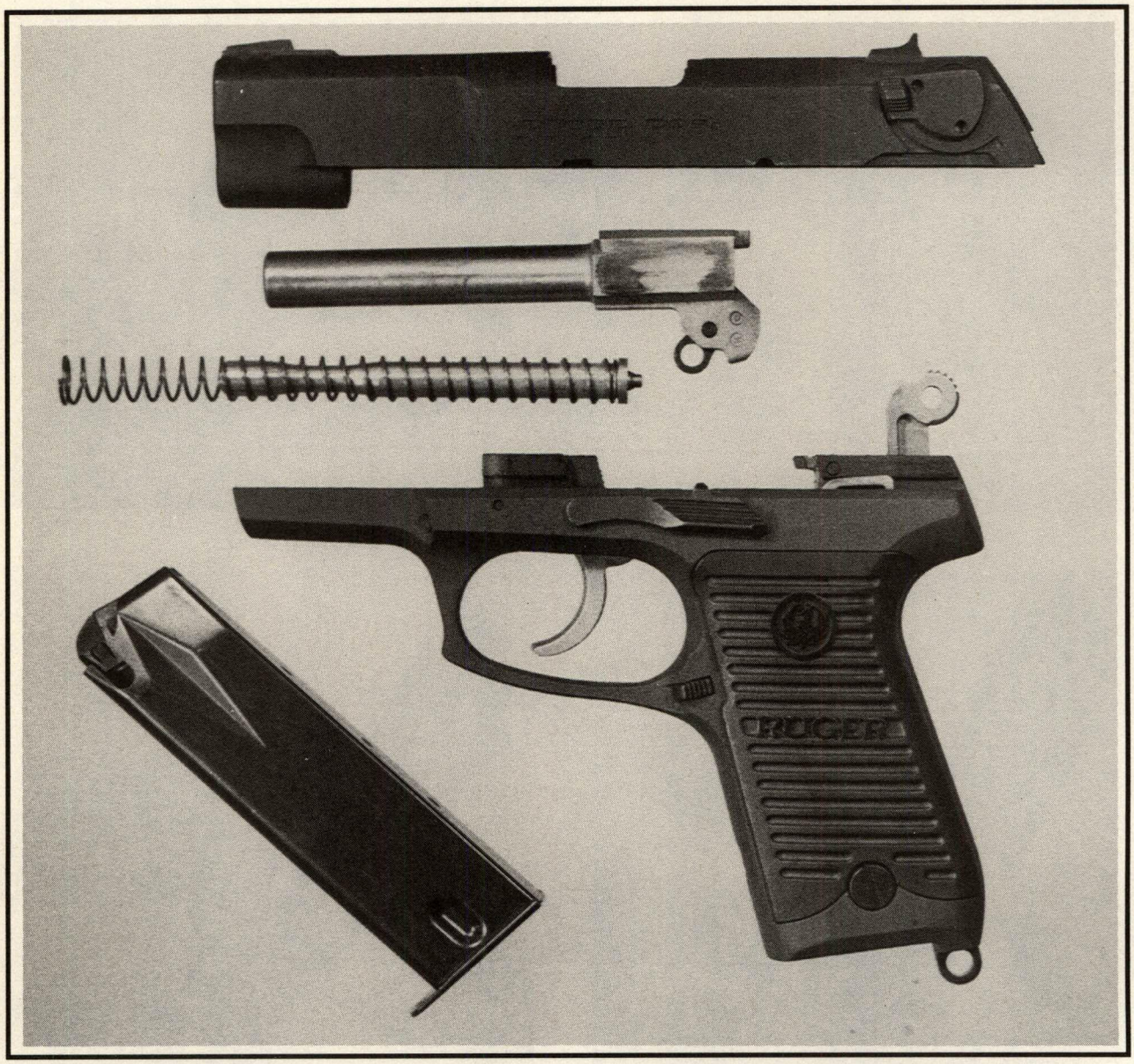




5. Keeping a tight grip on the recoil spring unit, disengage the guide from the underlug of the barrel, and remove the guide and spring. **Caution:** *This strong spring is under tension—control it.*



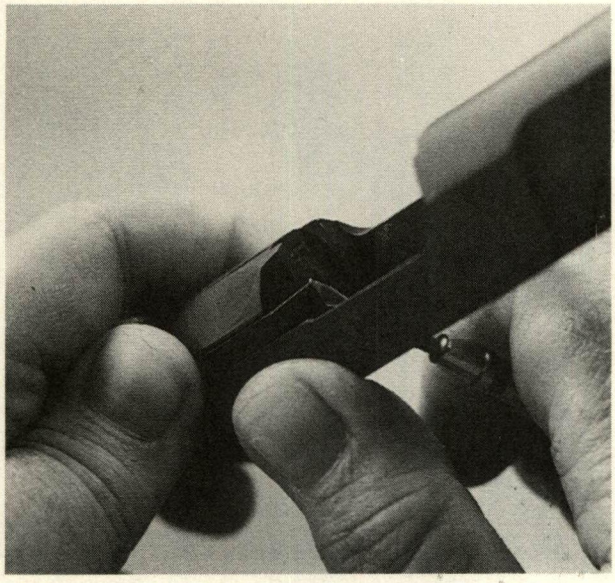
6. Move the barrel slightly forward, then remove it from the underside of the slide. The link can be removed from the barrel by drifting out the cross-pin, but in normal disassembly this is left in place. **Gun is now field-stripped.**



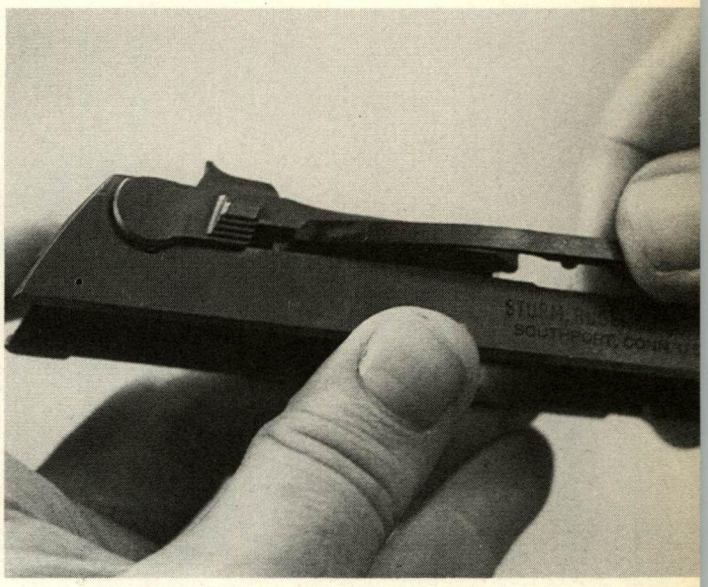
Ruger P-85 field-stripped

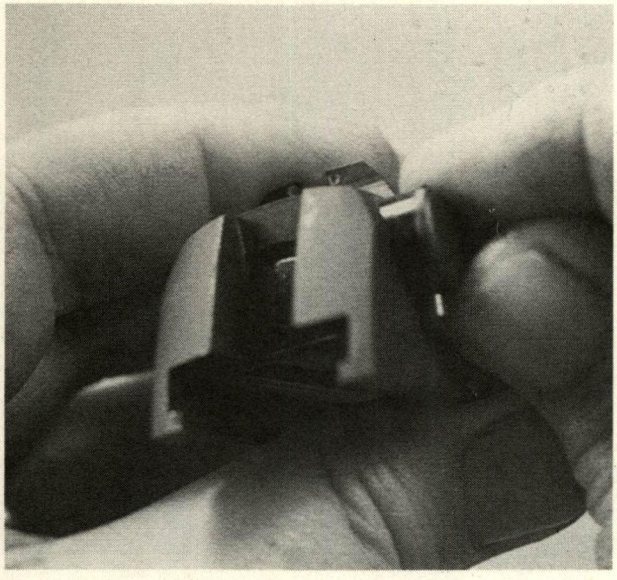
Detail Strip:

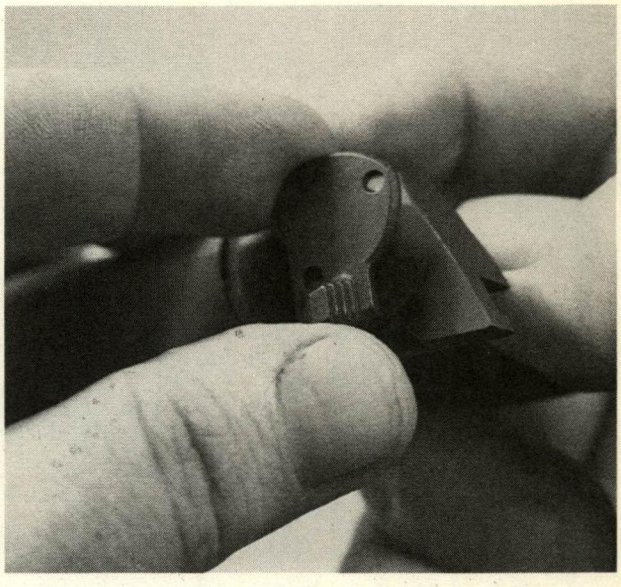
7. With a tool, flex the extractor outward until it can be levered forward.



8. Remove the extractor forward and toward the right.



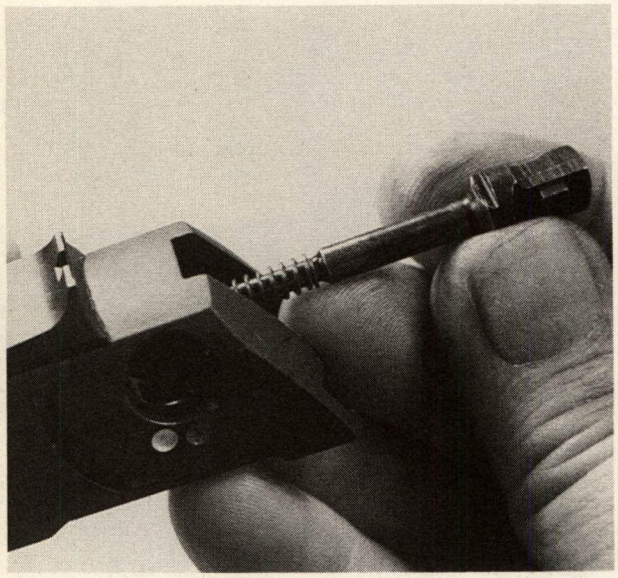




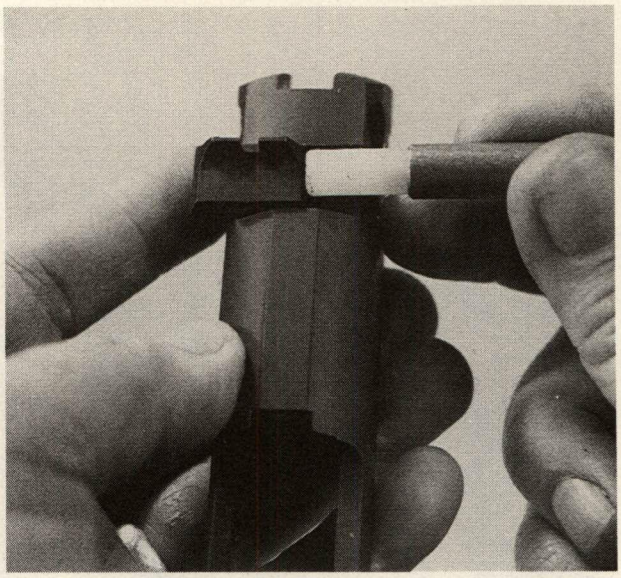
9. With the safety-levers in off-safe position, use a thumbnail or non-marring tool to nudge the right safety-lever outward. Keep a fingertip below the lever, to catch the positioning plunger and spring, which will be released downward as it clears the slide.

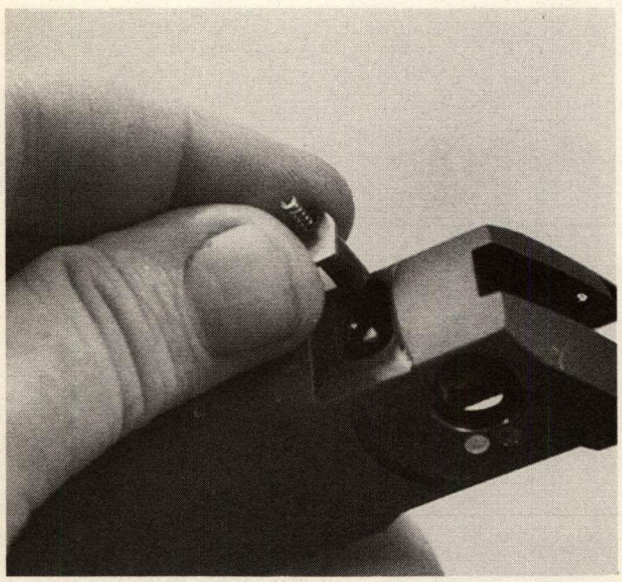
10. Turn the left safety-lever to the position shown, a little past on-safe position, and remove it toward the left. **Caution:** *Restrain the firing pin, which will be released as the safety clears the slide.*

11. Remove the firing pin and its spring toward the rear.

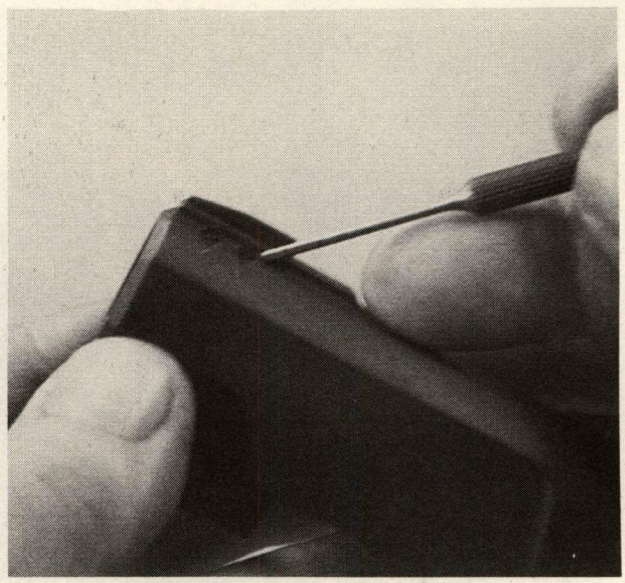


12. Use a non-marring tool to drive the rear sight out of its dovetail toward the right. Restrain the firing pin block spring as the sight clears it.



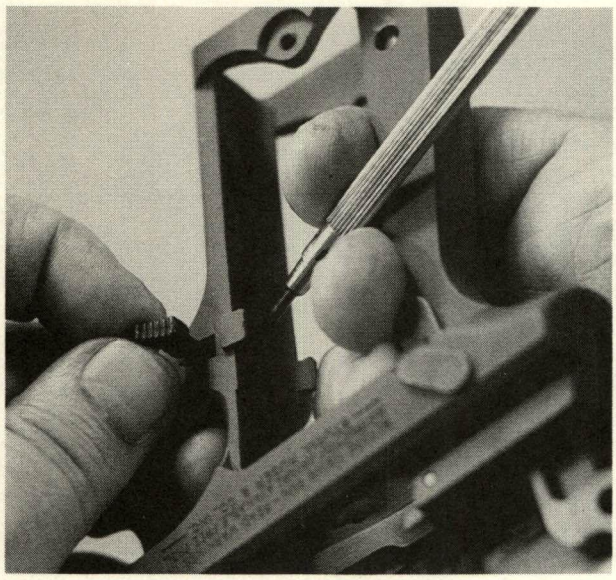


13. Remove the firing pin block and its spring upward.

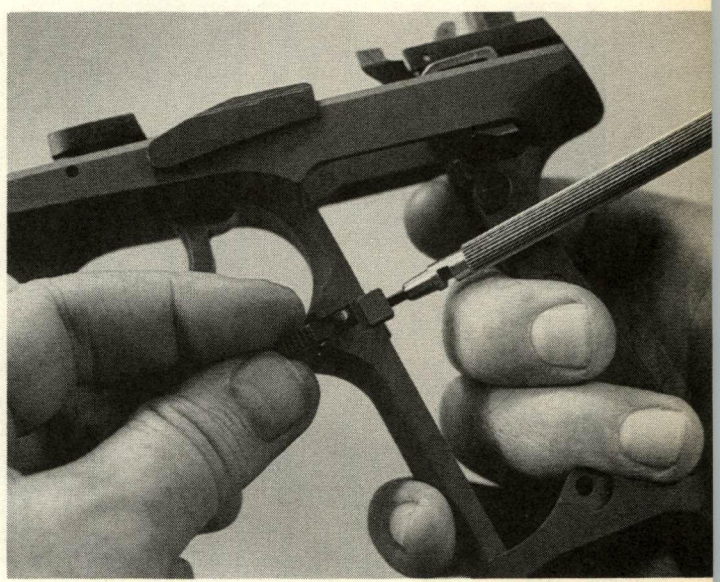


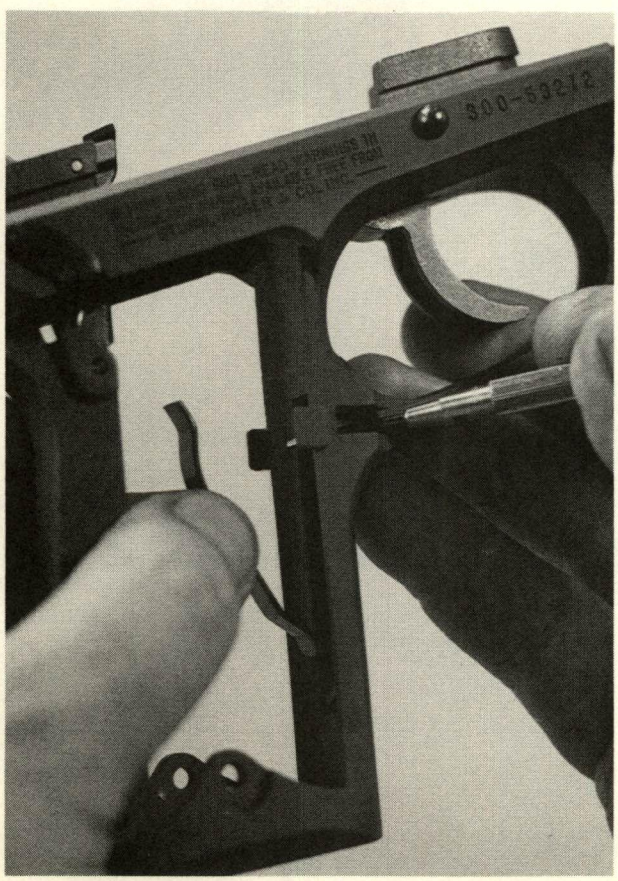
14. The front sight is retained on the slide by two roll pins, and is removed upward after the pins are driven out. In normal takedown, the front sight is not removed.

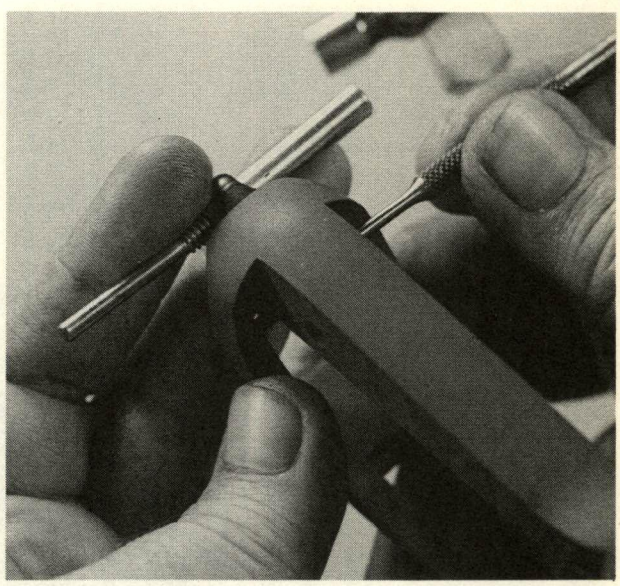
15. The grips are tightly fitted. After removal of the grip screws, insert a fingertip to gently pry the lower portion of the grip outward. With the grips removed, insert a tool to depress the top of the magazine catch spring, and remove the right magazine catch button toward the right.



16. Repeat this operation on the left magazine catch piece. It must be tipped forward to clear, and may need to be nudged from inside the frame.



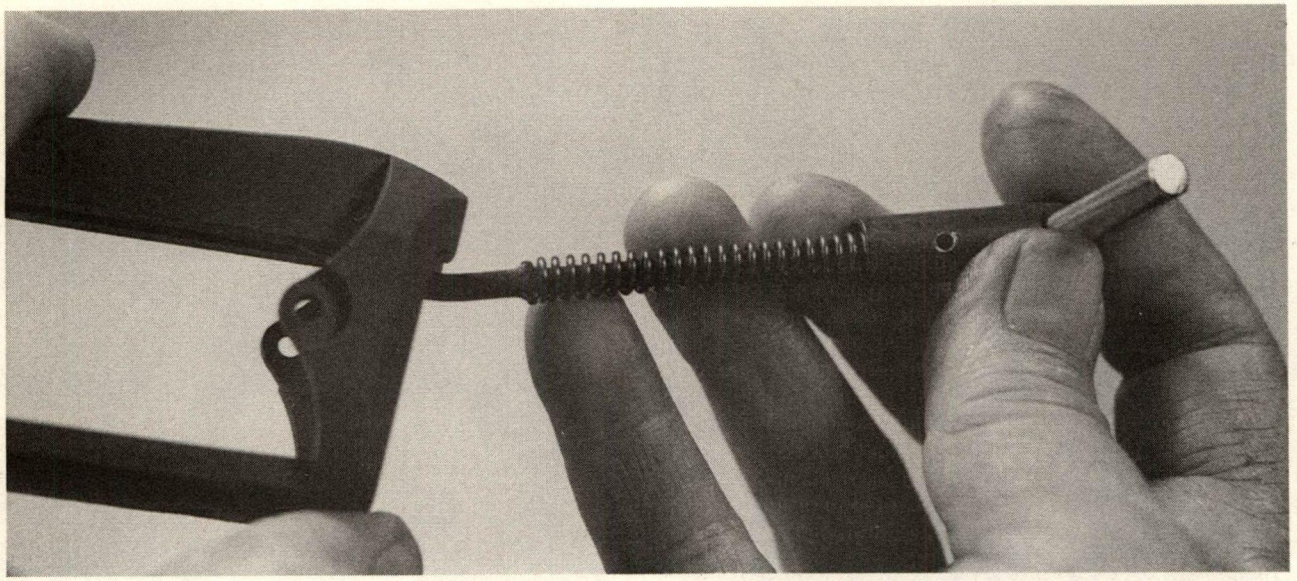


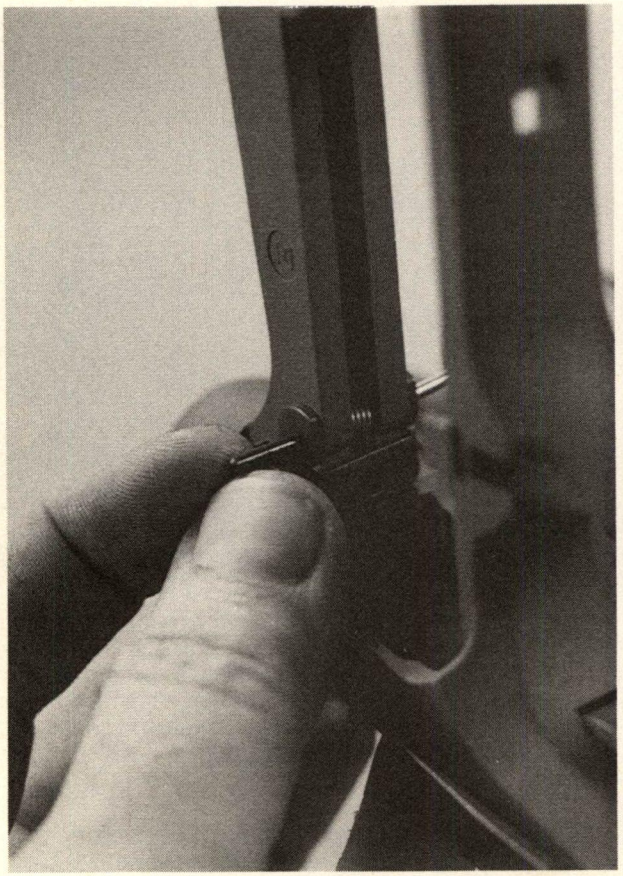


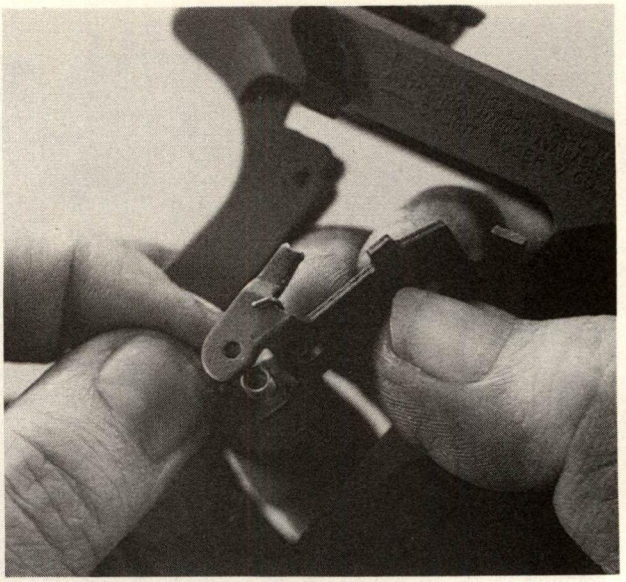
18. With the hammer in fired position, insert a drift through the lanyard loop to aid in restraining the hammer spring base, and drift out the cross-pin at the lower rear of the grip frame. **Caution:** *When the drift is removed from the pin hole, the base will be freed, and the spring is powerful. Control it.*

17. Tip the magazine catch spring toward the rear, into the magazine well, and remove it upward.

19. Ease out the hammer spring base, and remove the base, hammer spring, and hammer strut downward.



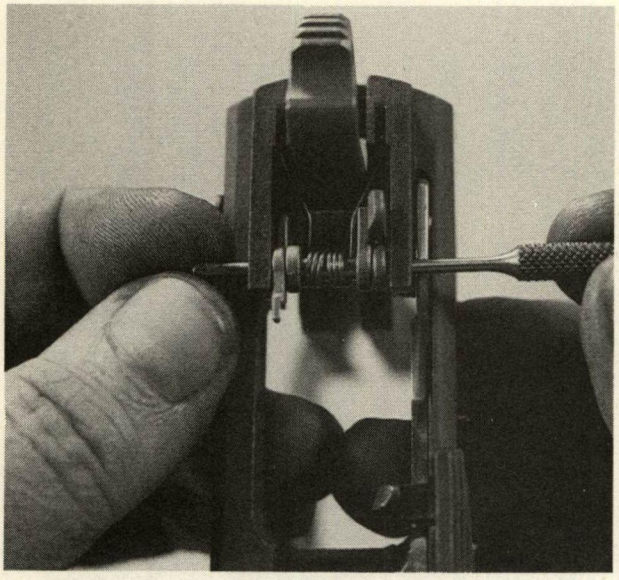




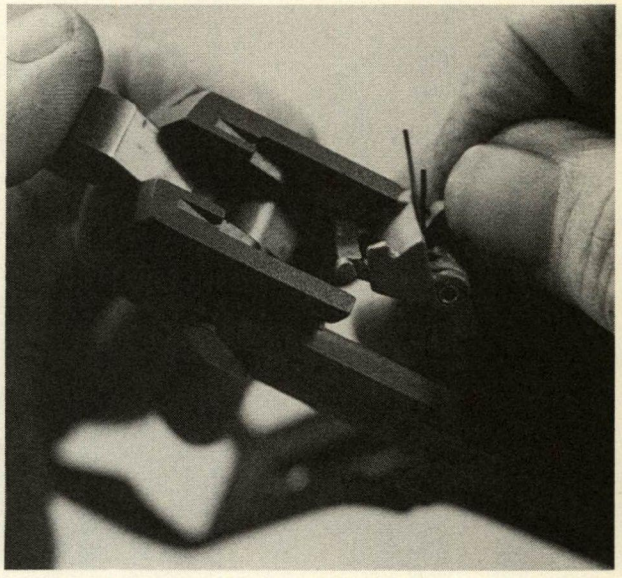
21. Remove the ejector and its spring forward, into the magazine well.

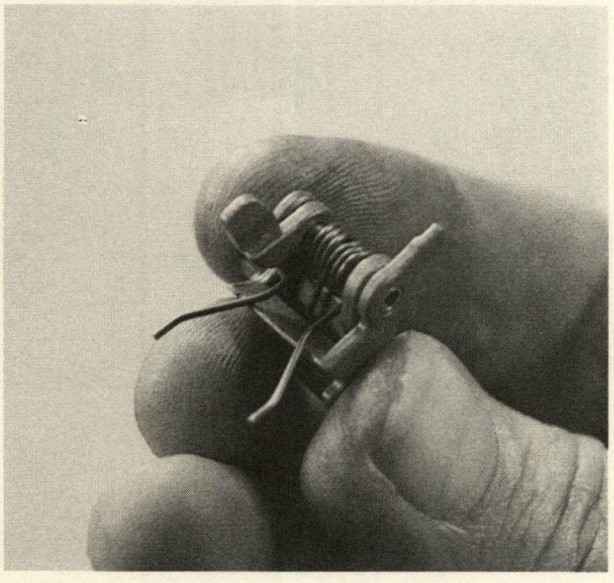
20. With the ejector in raised position, push out the ejector pivot pin toward either side.

22. Push out the sear cross-pin toward either side.

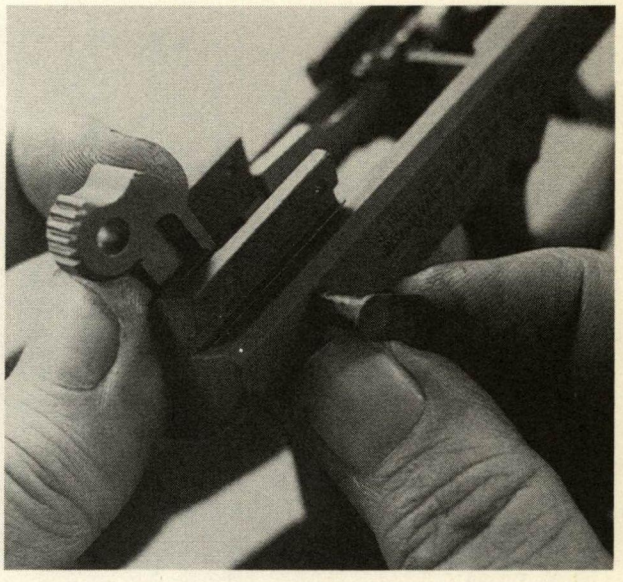


23. Move the hammer back to the cocked position. Move the sear assembly forward, and tilt it upward on the right, as shown, to free the sear arm from the trigger bar. Remove the sear unit upward.



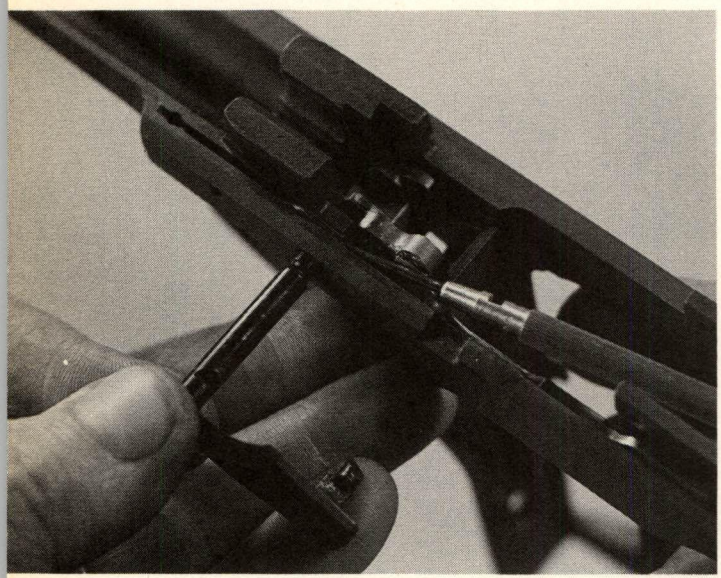


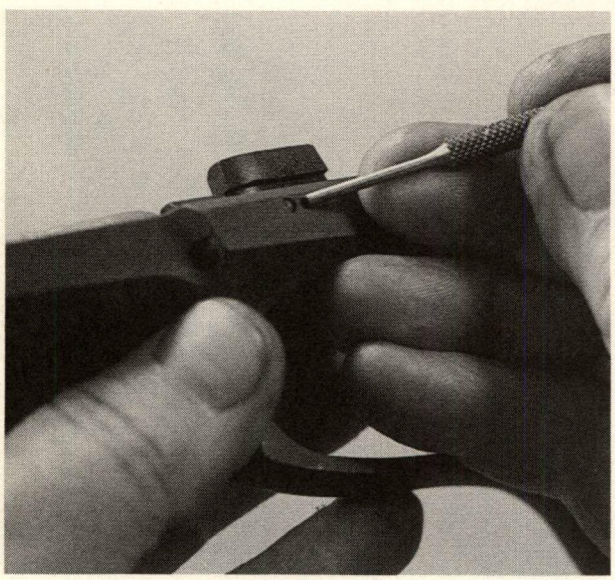
24. Pushing out the hollow pivot in the sear unit will allow separation of the sear and blocker lever, and the two torsion-type springs. Unless repair is necessary, this unit is best left assembled. **Caution:** *Springs are under tension.*



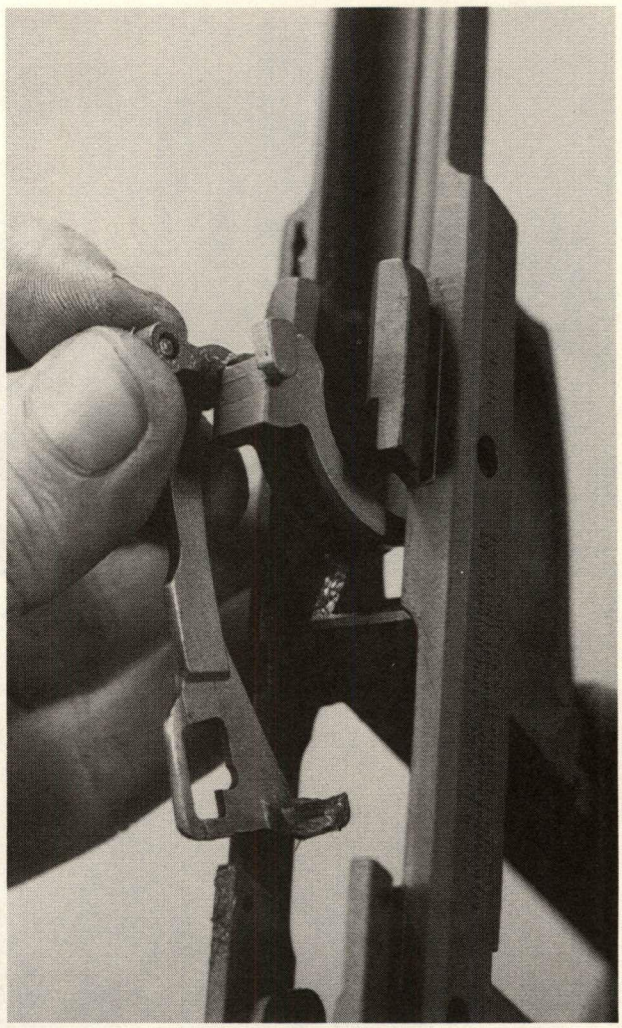
25. Pull out the hammer pivot, and move the hammer forward and up for removal.

26. Insert a tool to lift the tip of the slide-latch spring from its groove in the cross-shaft of the latch, and remove the slide-latch toward the left.





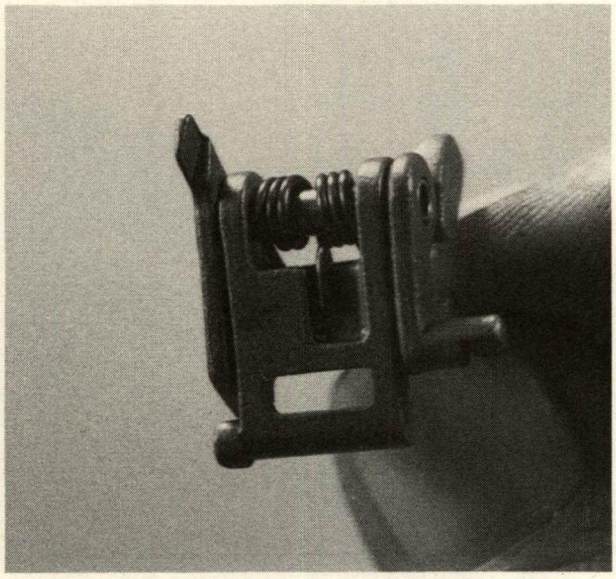
27. Remove the trigger assembly upward. The trigger and trigger bar are easily separated.



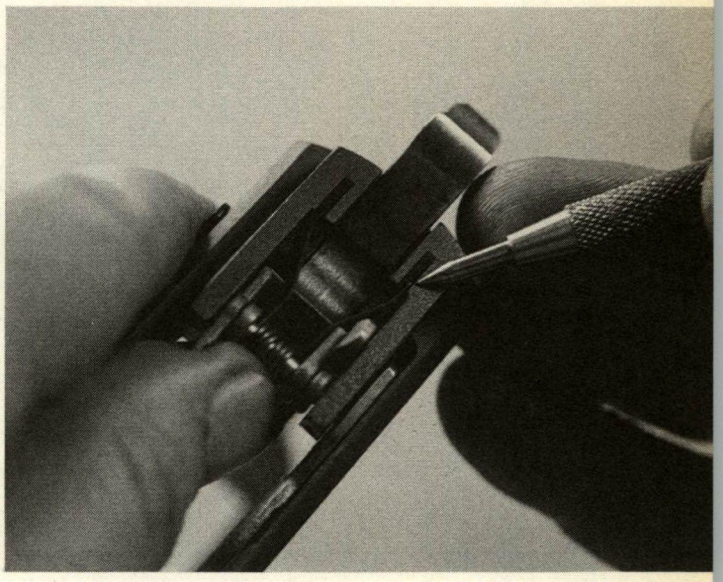
28. Drifting out the small pin above the guard (inward) will release the slide-latch spring for removal upward. As the drift is withdrawn, it will also release the retaining plug for the trigger spring and plunger, and these three parts are removed toward the front. **Caution:** *Both springs are under tension, so control them as the drift is pulled out.*

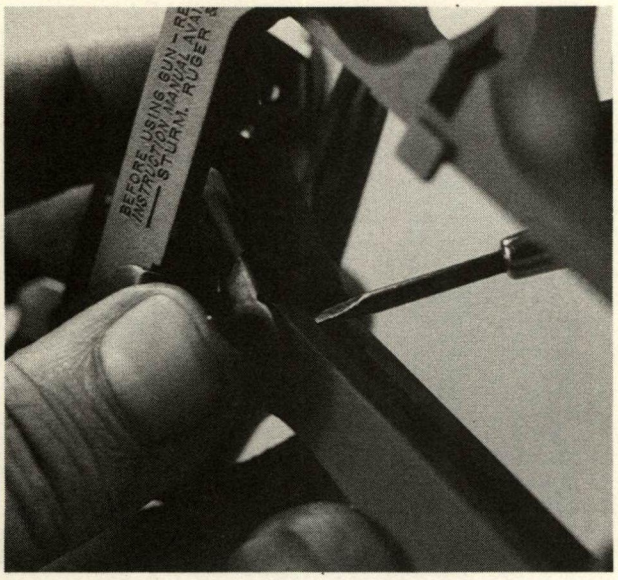
Reassembly Tips:

1. If the sear unit has been disassembled, be sure the sear, blocker lever, and the two springs are reassembled as shown.

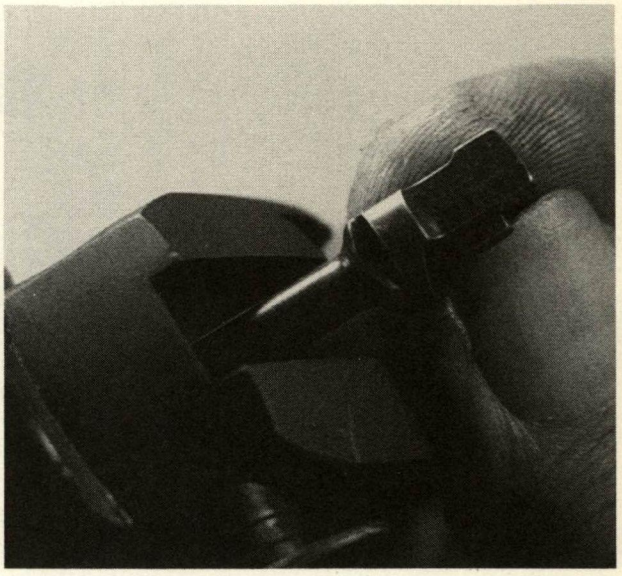


2. When pushing the sear unit back into place for insertion of the cross-pin, use a tool to guide the spring tails into the grooves at the rear.



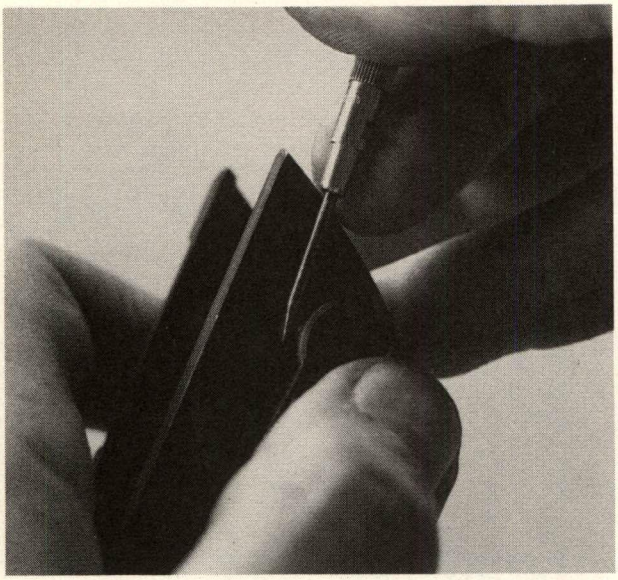


3. When replacing the ejector and its spring, hook the spring arm onto the ejector before it is inserted in the frame, then use a tool to push the coil of the spring into place for insertion of the cross-pin. Be sure the sear contact arm of the ejector is *behind* the sear projection.

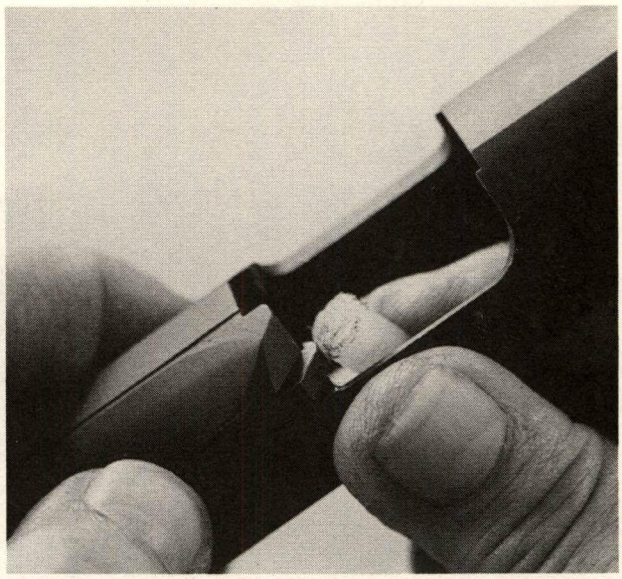


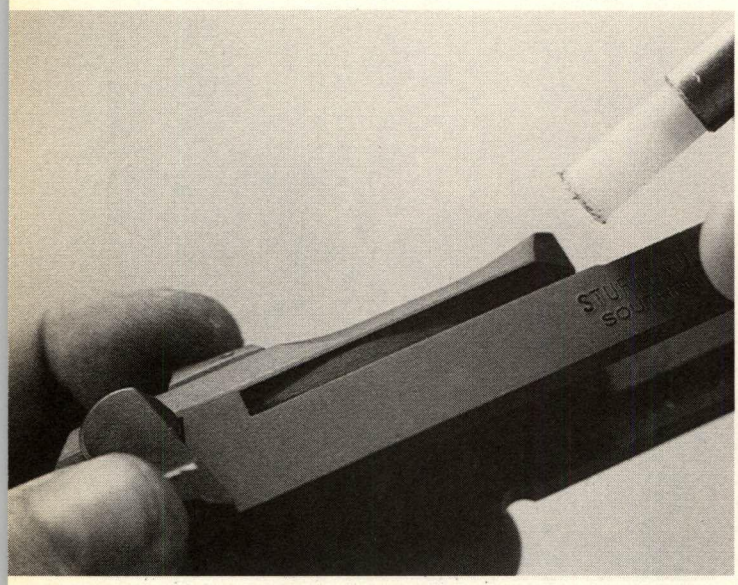
4. When replacing the firing pin, be sure it is oriented as shown. Remember to depress the firing pin block as the pin is pushed into place.

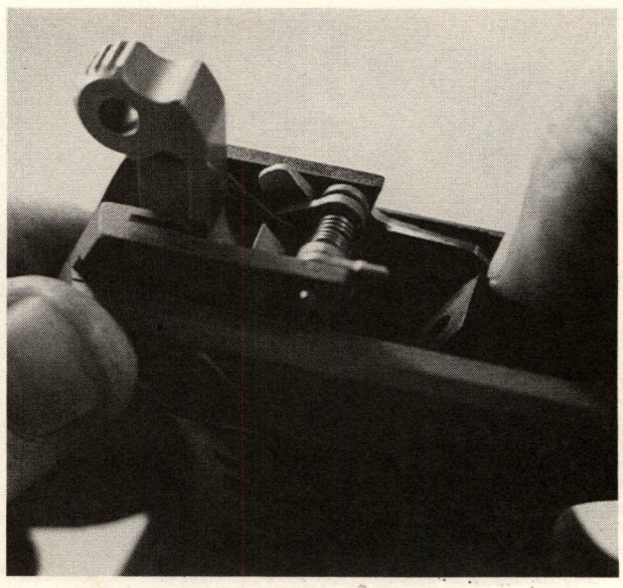
5. As the right safety-lever is installed, a tool must be used to depress the positioning plunger as the safety is pushed into place.



6. When installing the extractor, keep pressure on its mid-point at the side while pushing it toward the rear. Use a non-marring tool at the front.







7. Be sure the extractor is fully to the rear and locked in place. When properly installed, it will have an arch at the center and will go inward at the front and rear, as shown.

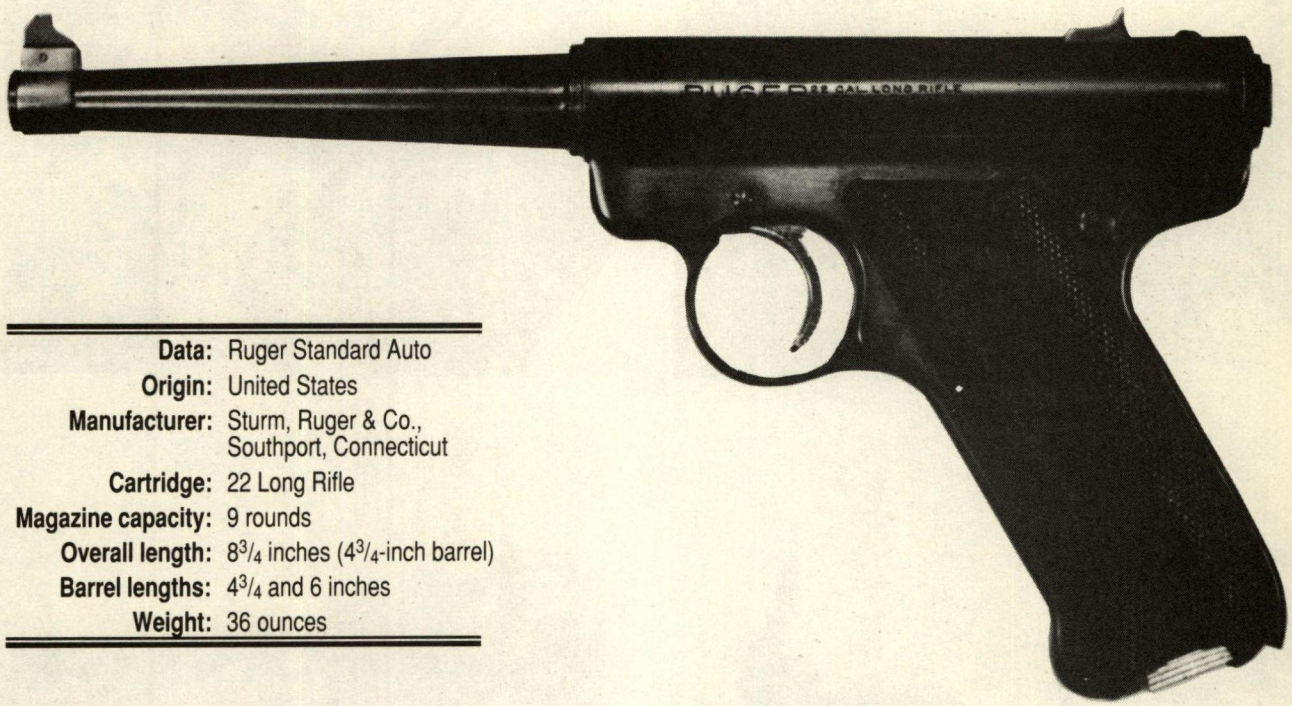
8. Remember that before the slide can be put back on the frame, the disconnector must be tipped over forward, just as it was in the initial takedown step.

Ruger Standard Auto

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Ruger Standard Auto also apply to the following guns.

Ruger Mk. I
Ruger Mk. II
Ruger Mk. II Target
Ruger Mk. II Bull Barrel
Ruger Mk. II Government Model

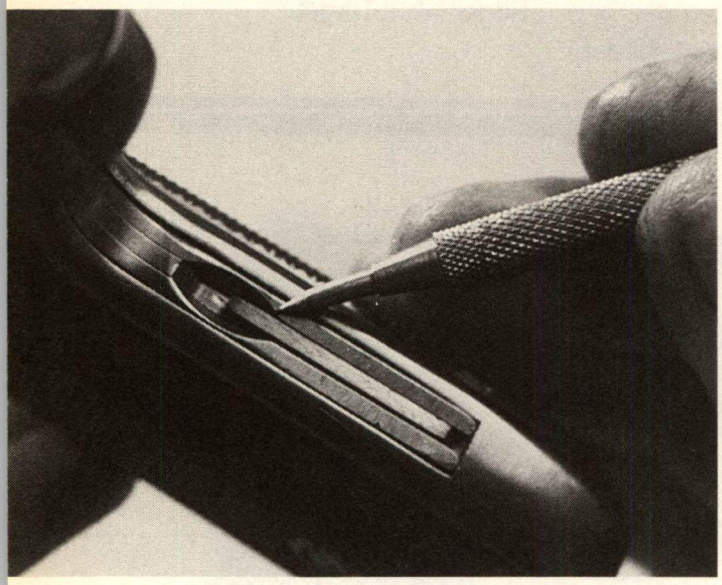


Data:	Ruger Standard Auto
Origin:	United States
Manufacturer:	Sturm, Ruger & Co., Southport, Connecticut
Cartridge:	22 Long Rifle
Magazine capacity:	9 rounds
Overall length:	$8\frac{3}{4}$ inches ($4\frac{3}{4}$-inch barrel)
Barrel lengths:	$4\frac{3}{4}$ and 6 inches
Weight:	36 ounces

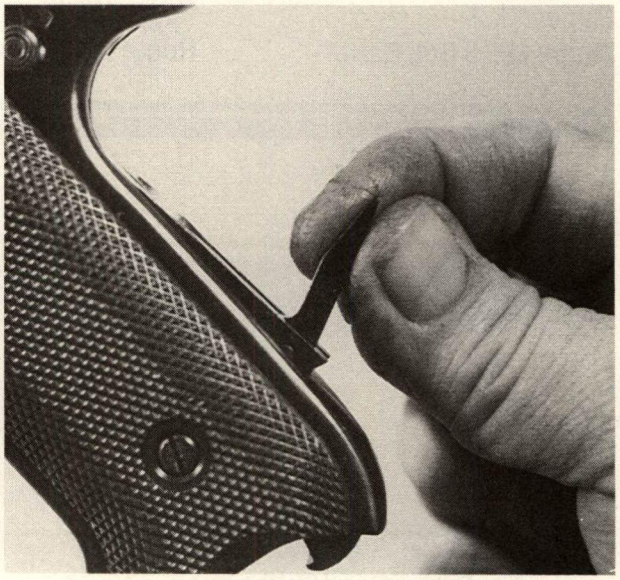
Both the Ruger name and the general shape and balance of this pistol bear a resemblance to a famed German name and handgun—the Luger. Unlike the Parabellum, though, the Ruger Standard Auto is an exercise in simplicity and good mechanical design. The uncomplicated mechanism makes takedown and reassembly easy, but there are still a few points that can cause difficulty for those who are unfamiliar with the pistol. These will be noted in the instructions which follow. The current-production Mark II pistols have an added hold-open latch, but otherwise they are mechanically the same.

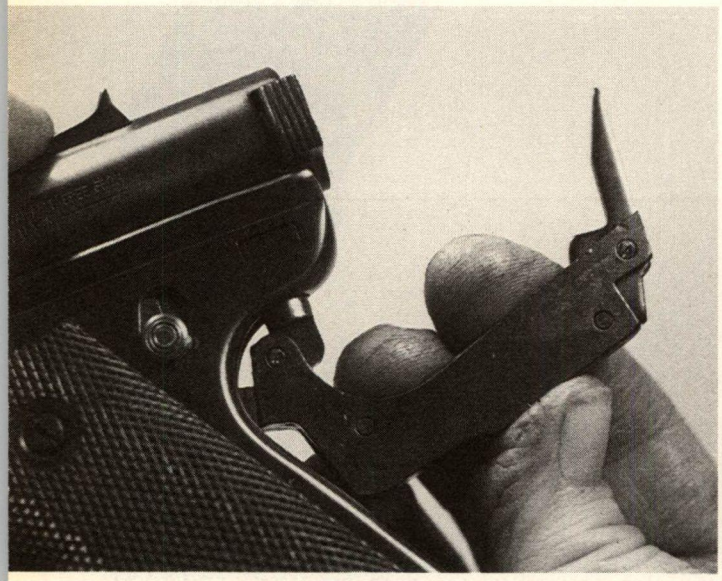
Field Strip:

1. The takedown-latch is located in the backstrap of the grip frame. There is a recess at the top of the latch lever which allows the insertion of a fingertip or any other non-marring tool to pull the lever toward the rear.

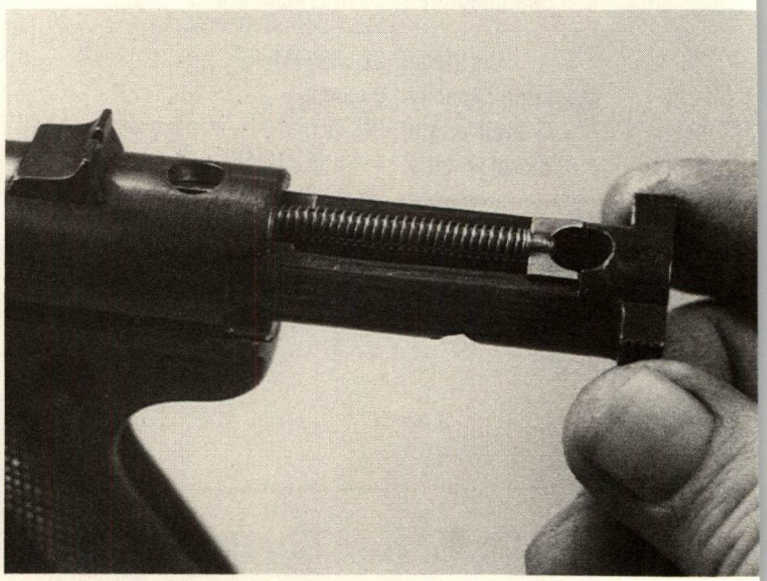


2. With the hammer in lowered position and the magazine removed, pull the latch lever out toward the rear.



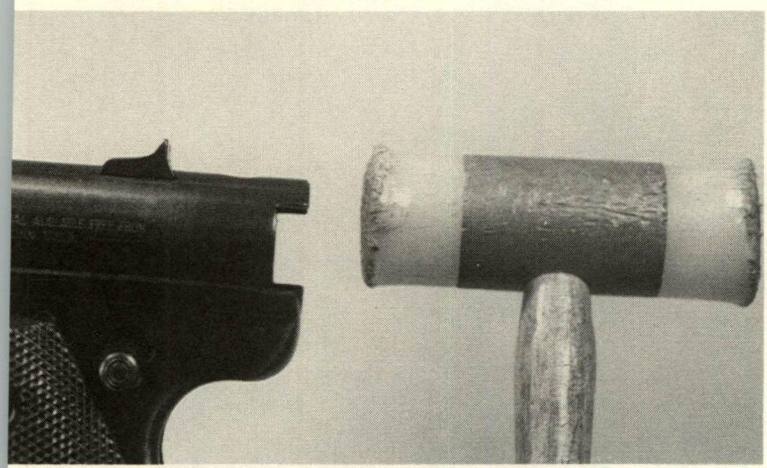


3. Swing the mainspring housing out and turn it up toward the rear. Then, pull the housing straight down to withdraw the bolt-stop pin from the frame and barrel extension.

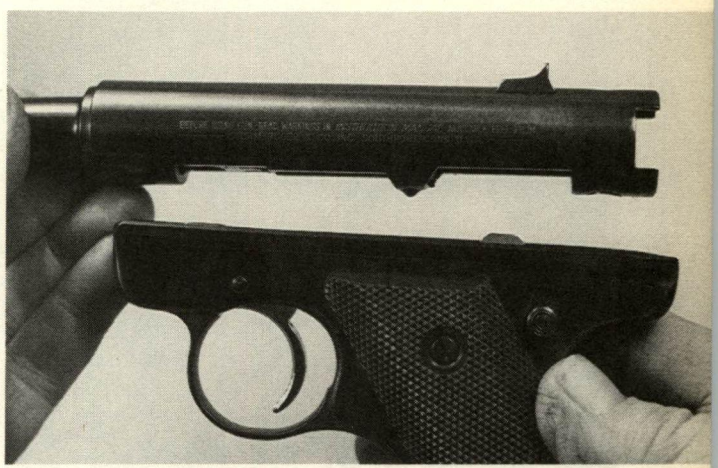


4. Remove the bolt from the rear of the barrel extension (receiver).

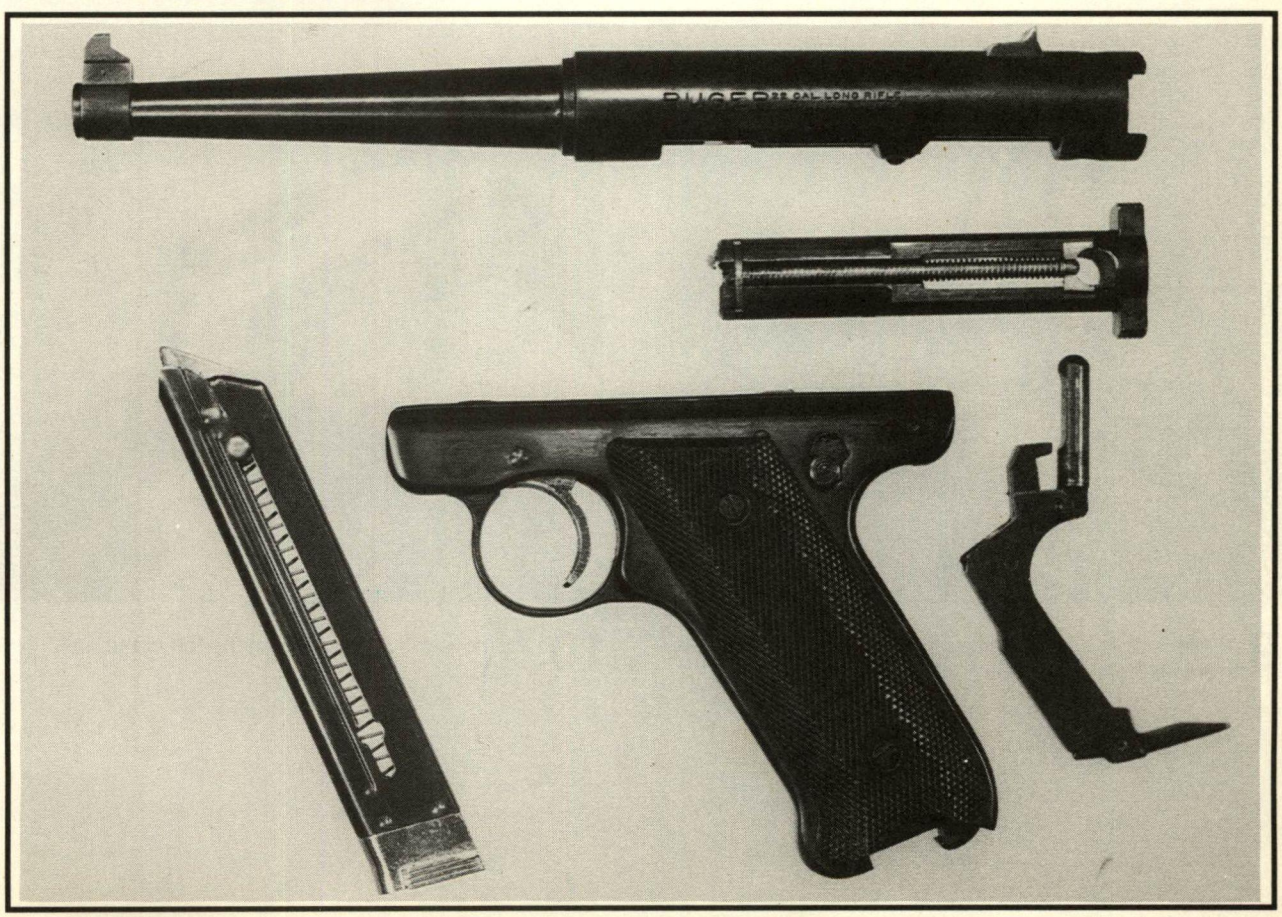
5. Move the barrel and receiver unit forward to free it from the internal hook at the front of the frame. **Note:** On some guns which are tightly fitted, it may be necessary to tap the rear of the receiver with a nylon hammer to move it forward.



6. Lift the barrel and receiver unit from the top of the frame. **Gun is now field-stripped.**

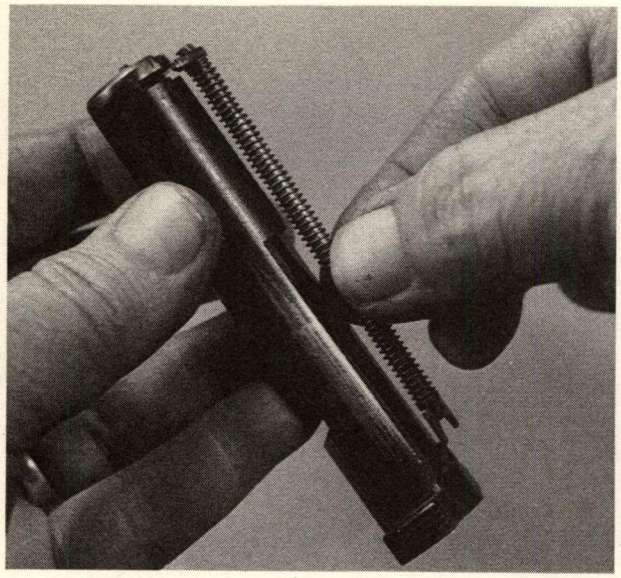


Ruger Standard Auto field-stripped

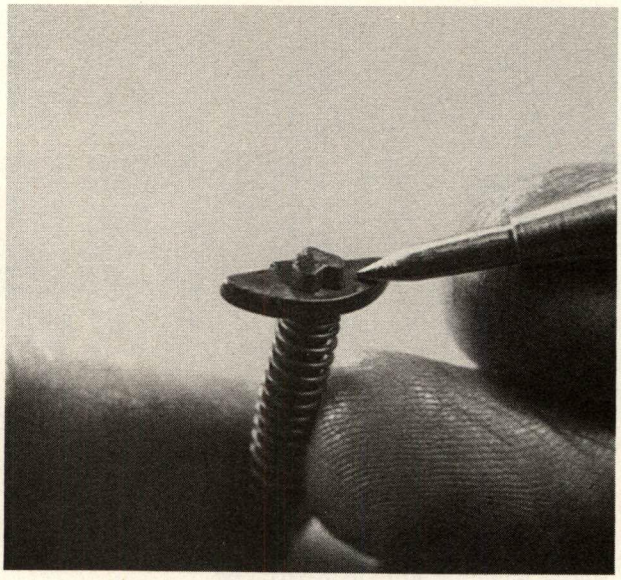


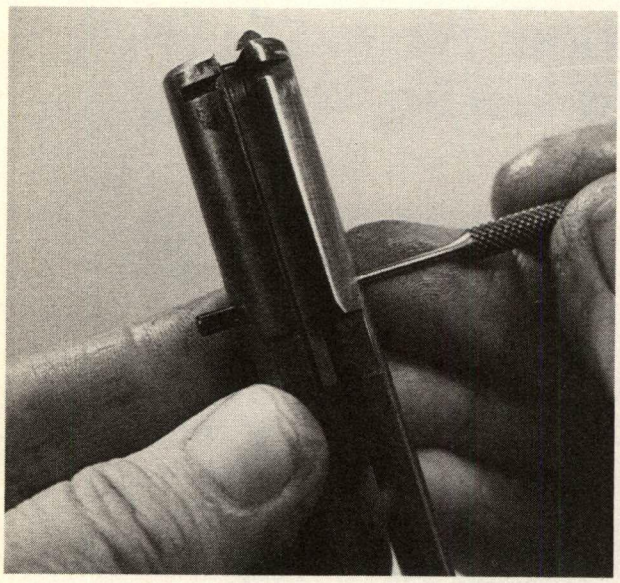
Detail Strip:

7. Lift the recoil spring unit from the top of the bolt.

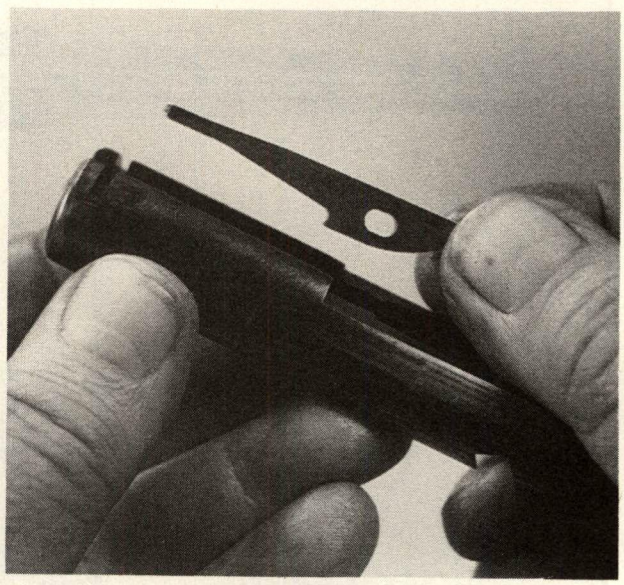


8. The front end of the recoil spring guide is riveted to retain the support cross-piece, and disassembly of this unit is not advisable.



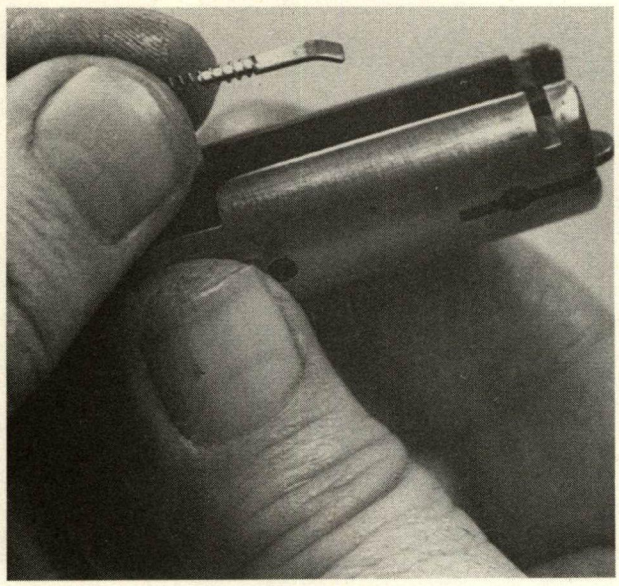


9. From either side of the bolt, push out the firing pin retaining pin.

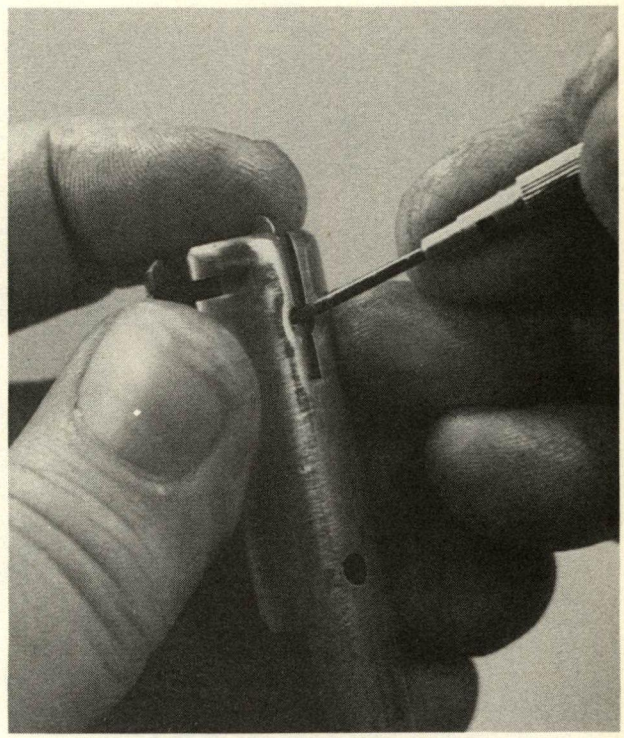


10. Remove the firing pin from the top of the bolt.

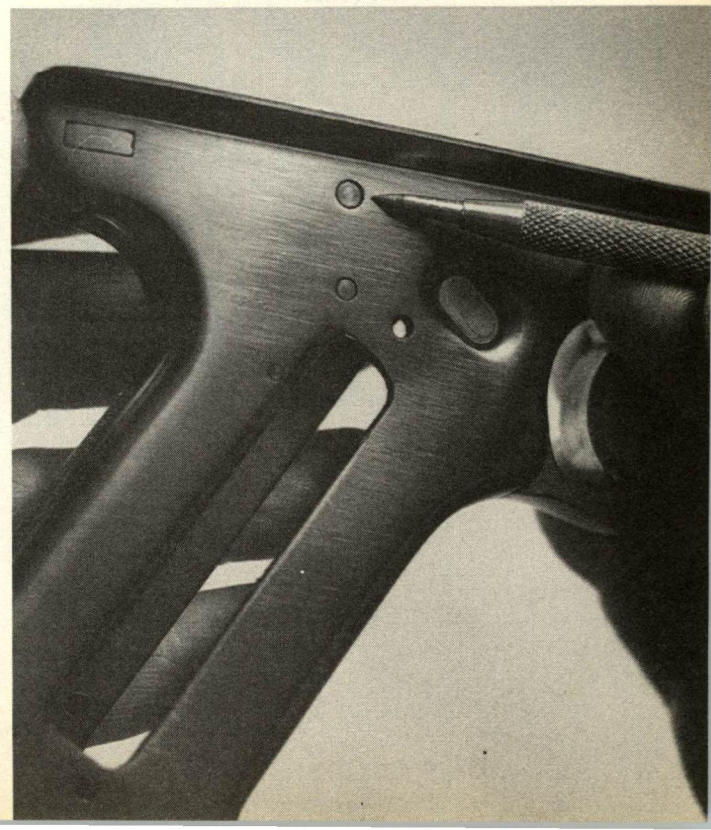
11. Remove the firing pin spring and spring support from the firing pin recess in the bolt.



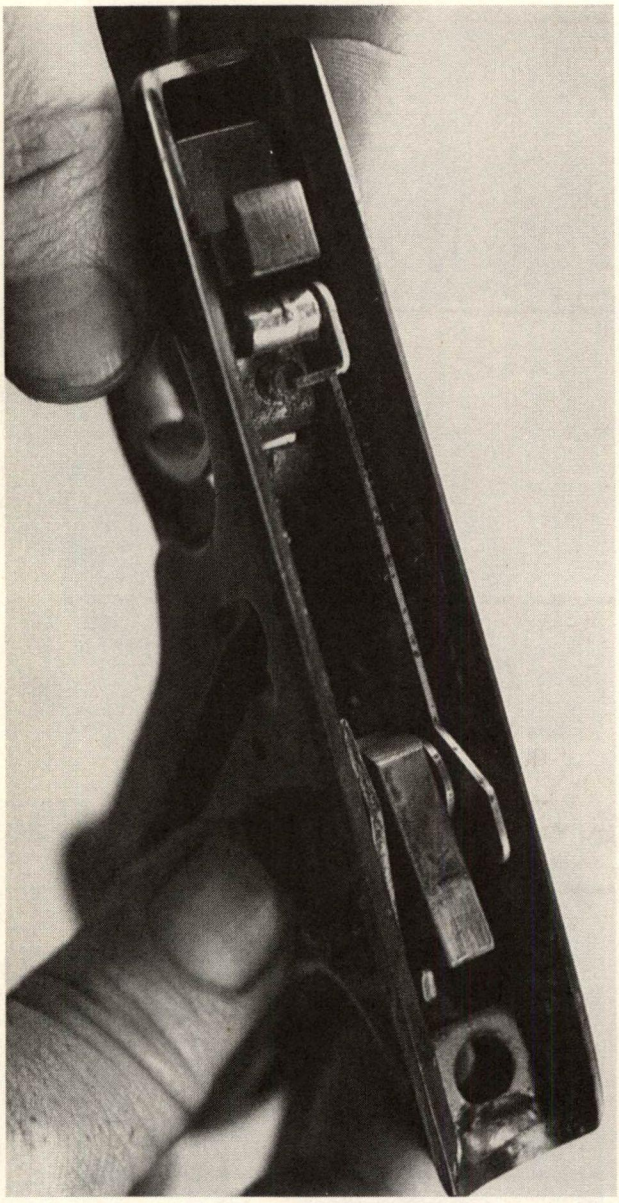
12. With a small, sharp screwdriver, depress the extractor spring plunger and remove the extractor from its recess. **Caution:** *Take care to release the tension of the extractor spring slowly, and remove the plunger and spring from the bolt, toward the front.*



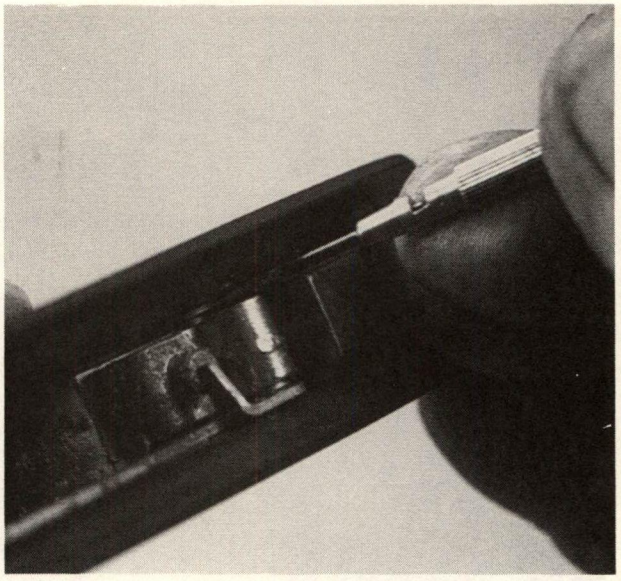
13. The large pin at the top of the frame is pushed out to release the hammer for removal from the top. The trigger bar/disconnector will rise with the hammer as it surrounds the hammer pivot on the right side. The hammer pivot (hammer bushing) is easily removed from the hammer, toward the right. The hammer strut can be separated from the hammer by pushing out the small pin at the rear of the hammer, toward the left. The safety catch can now be moved inward and removed from the top of the frame. Pushing out the small pin below the hammer pin will release the sear and its spring, and the smaller pin below the sear pin is the bearing pin for the tail of the sear spring.

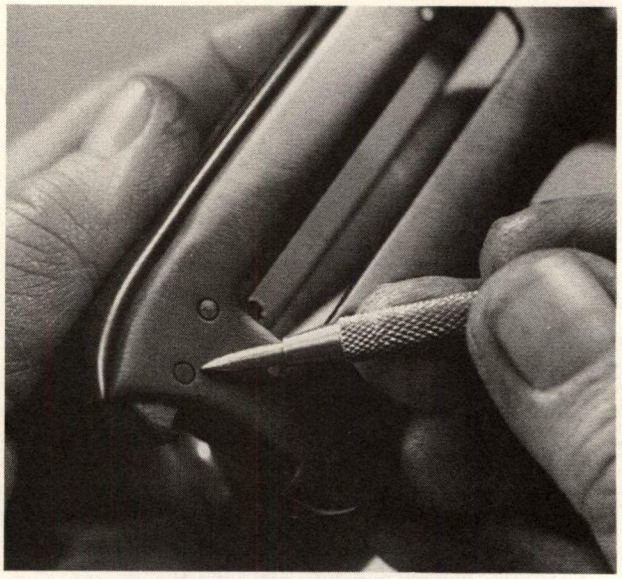


14. This view of the top of the frame shows the relationship of the parts mentioned previously.



15. The trigger pin is retained in the frame by a small C-clip which grips a groove in the pin on the left side. After the clip is pried from the groove, the trigger pin must be removed toward the left. The trigger is removed upward, and the trigger bar, spring, and plunger are easily separated from the trigger.

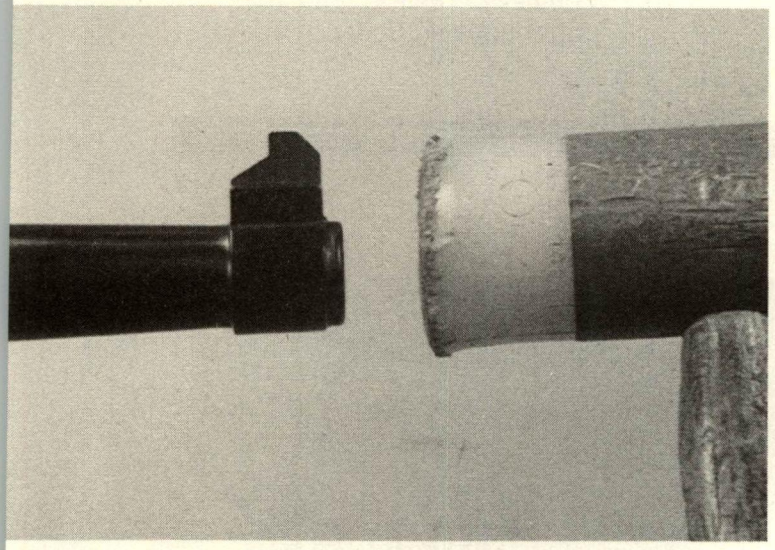


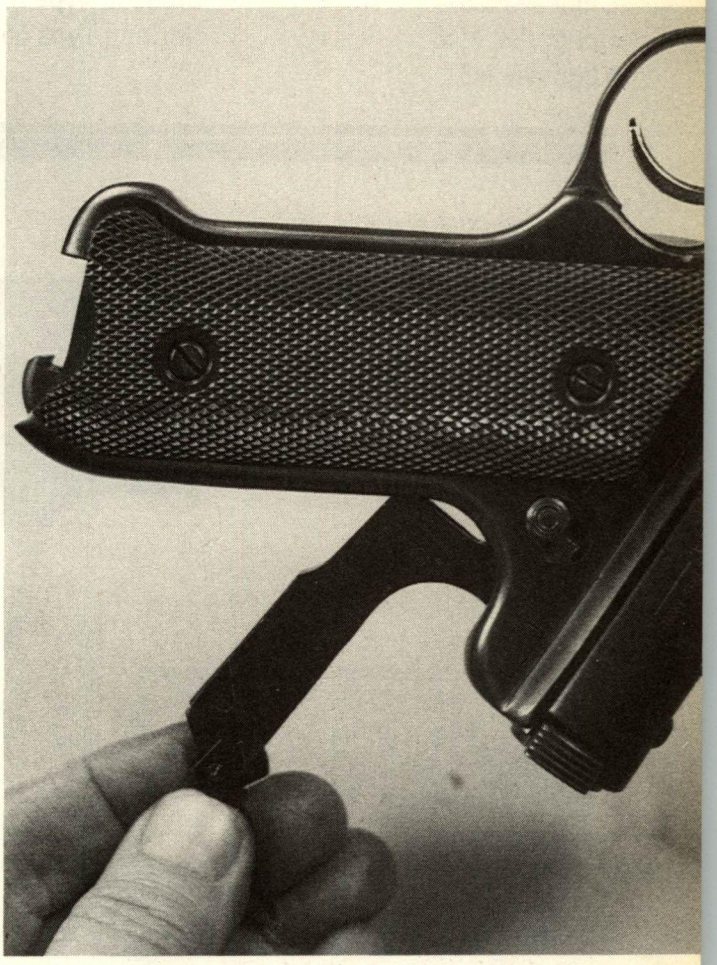


16. The lower pin at the bottom of the grip frame retains the magazine catch and its spring, and the upper pin is the stop pin for the magazine catch. Before removal, note the position of the spring. The separate ends of the spring go toward the top, while the loop of the spring bears on the catch.

Reassembly Tips:

1. Just as it is sometimes necessary to tap the barrel unit forward during disassembly, the barrel may need a tap toward the rear during reassembly to set the unit on the frame hook. To gauge whether the unit is in position, check the hole for the bolt stop pin at the rear to be sure that the unit is properly aligned with the frame.





2. After reinsertion of the bolt stop pin, be sure the hammer is in the fired position and tilt the pistol as shown to drop the hammer strut against the inside of the mainspring housing. This will insure that the strut seats against the mainspring plunger as the housing is swung back into the frame. If the housing is locked in place, but the bolt cannot be retracted, you will know that the strut has missed and you'll have to reopen the housing and try again. Although this operation is not difficult, it is the one point that often baffles those who take the Ruger apart for the first time.

The mainspring housing can be disassembled by drifting out the takedown lever pin at the lower end of the housing, but this sequence has been intentionally omitted for two reasons. First, the mainspring is quite strong and has a ball bearing at its lower end, making reassembly extremely difficult. Second, the pins in the housing, retaining the lever and the bolt-stop pin at the top, are riveted in place at the factory, and are usually difficult to remove and replace. If disassembly for repair is necessary, it would be wise to return this unit to the factory.

Russian Tokarev

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Russian Tokarev also apply to the following guns.

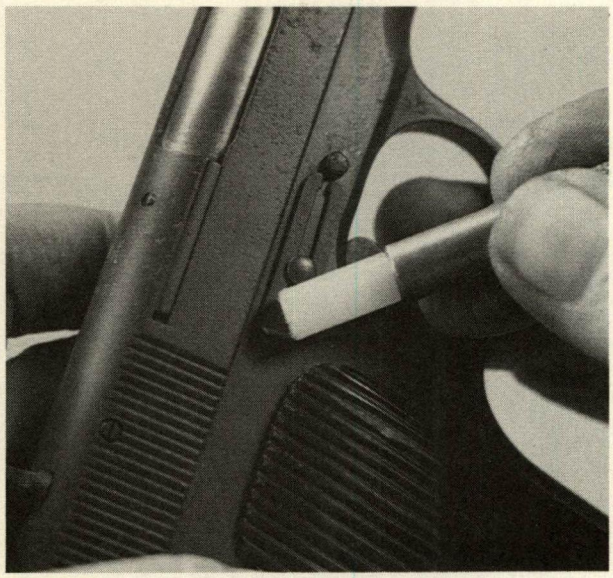
Chinese M20
Chinese Type 51
Chinese Type 54
Hungarian M48
Norinco Type 54-1
Sportarms M213
Yugoslav M57

Data:	Russian Tokarev
Origin:	U.S.S.R.
Manufacturer:	Tula Arsenal
Cartridge:	7.62mm Tokarev
Magazine capacity:	8 rounds
Overall length:	7.68 inches
Height:	5.25 inches
Barrel length:	4.57 inches
Weight:	29.4 ounces

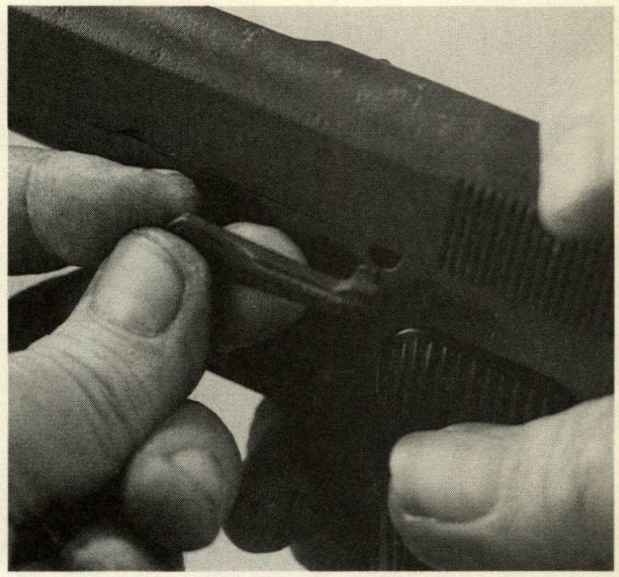
The earliest Tokarev pistols had a removable plate in the backstrap of the frame for trigger removal. There have been three Chinese-made military versions of the pistol, and the one shown here is a Chinese Type 54. Hungary and Yugoslavia have also produced the Tokarev. More recently, there have been 9mm commercial Chinese pistols, marketed in the U.S. as the Norinco Type 54-1 and the Sportarms Model 213. These have an added manual safety. The instructions will apply for all of these.

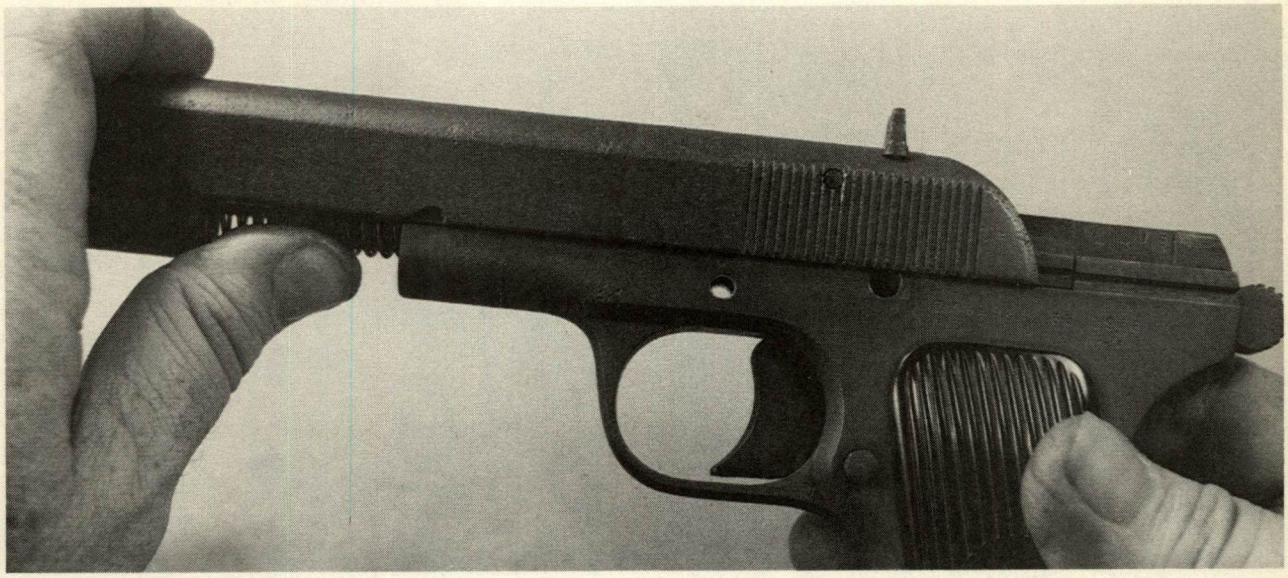
Field Strip:

1. With the magazine removed, use a non-marring tool to exert rearward pressure on the rear flange of the spring retainer on the right side of the frame, snapping its forward arms off the tip of the slide-latch cross-shaft. Take care that the retainer does not strike the top of the grip panel.



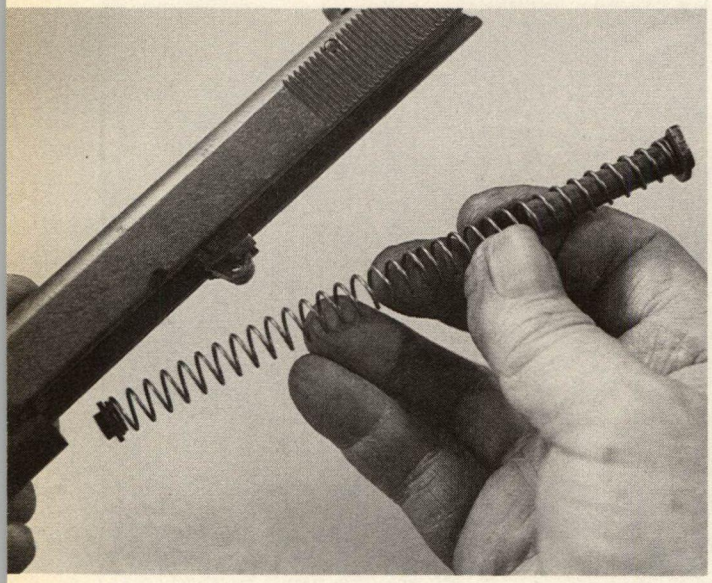
2. Restrain the slide, and remove the slide-latch toward the left.



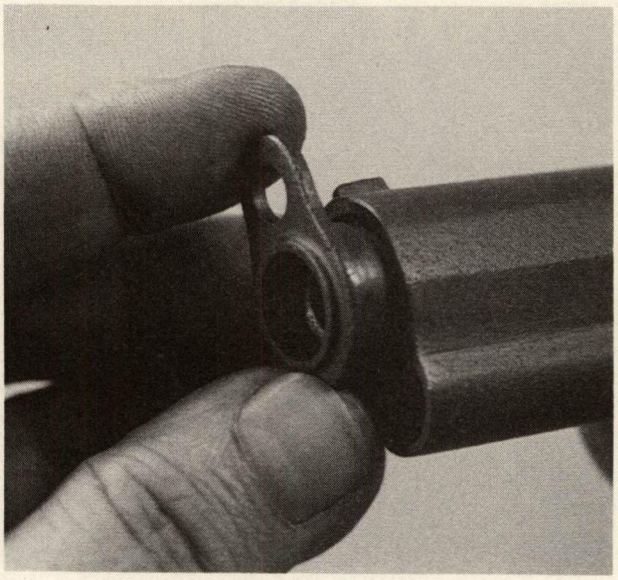


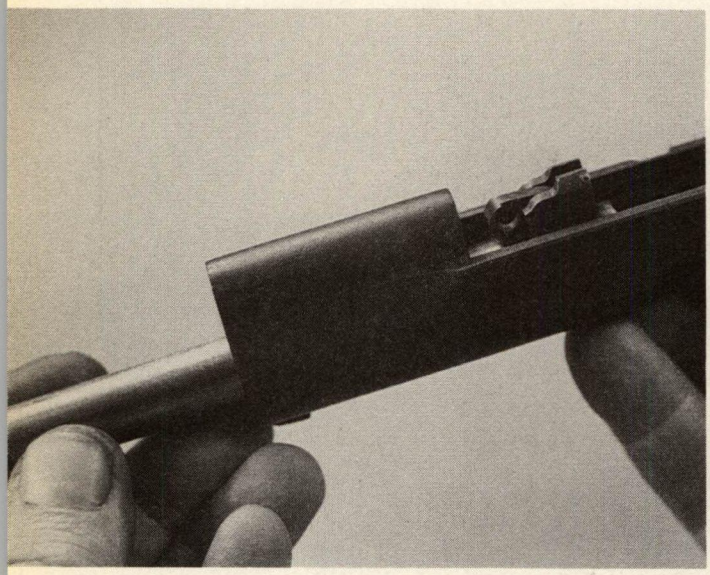
3. Remove the slide assembly toward the front. The recoil spring will tend to bow outward as it clears the frame, so keep a fingertip there to control it.

4. Slowly release the spring, and remove the recoil spring, guide, and front button from the underside of the slide.

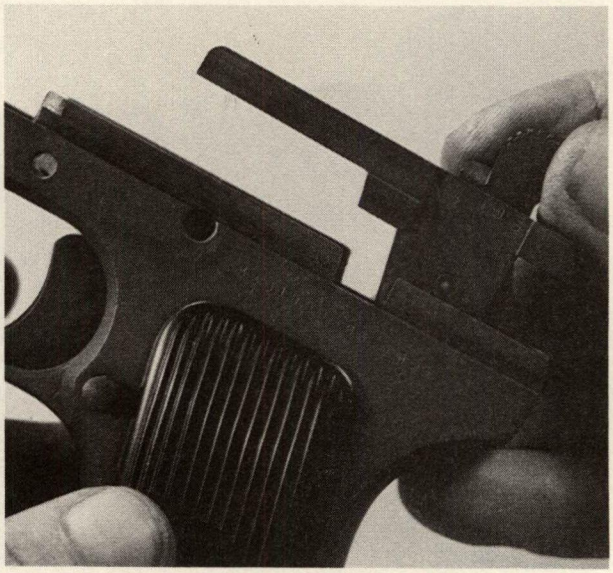


5. Turn the barrel bushing to the position shown, and remove it toward the front.

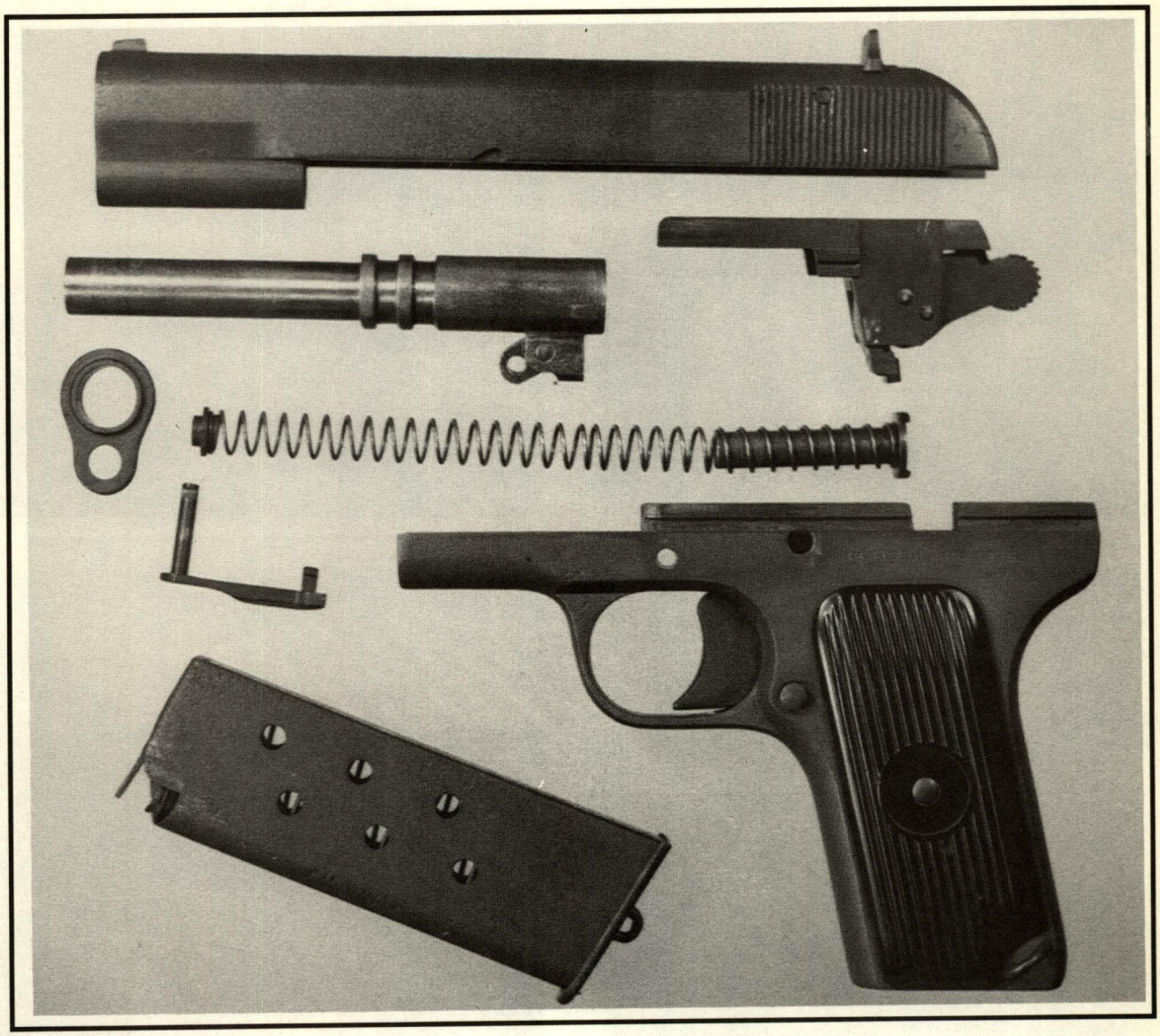




6. Tip the barrel link over forward, and remove the barrel toward the front. If necessary, the link pin can be driven out to separate the link from the barrel. In normal takedown, leave it in place.



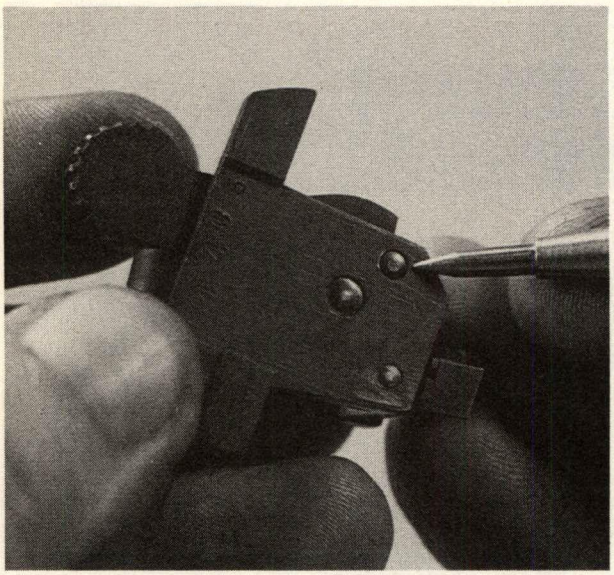
7. Lift the hammer assembly upward out of the frame. **Gun is now field-stripped.**



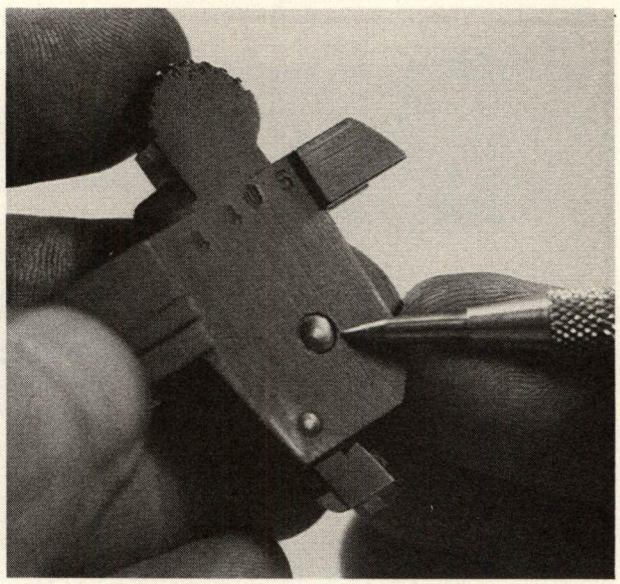
Russian Tokarev field-stripped

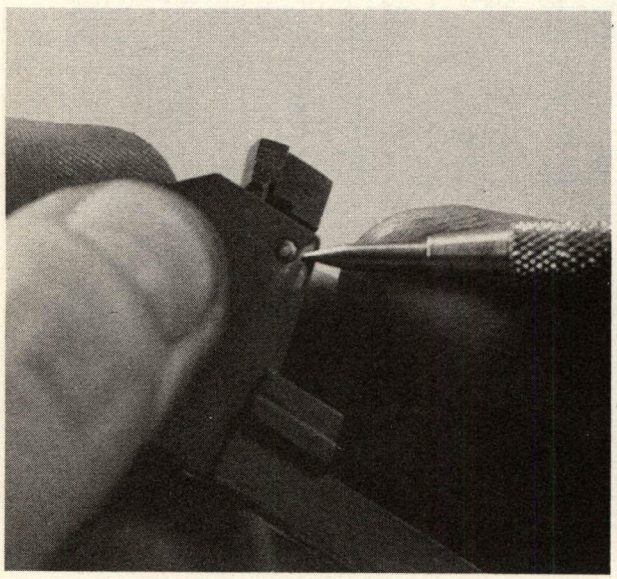
Detail Strip:

8. With the hammer in fired position, drifting out the cross-pin at the lower rear of the sub-frame will release the hammer spring for removal downward. **Caution:** *The spring is under tension, control it.*

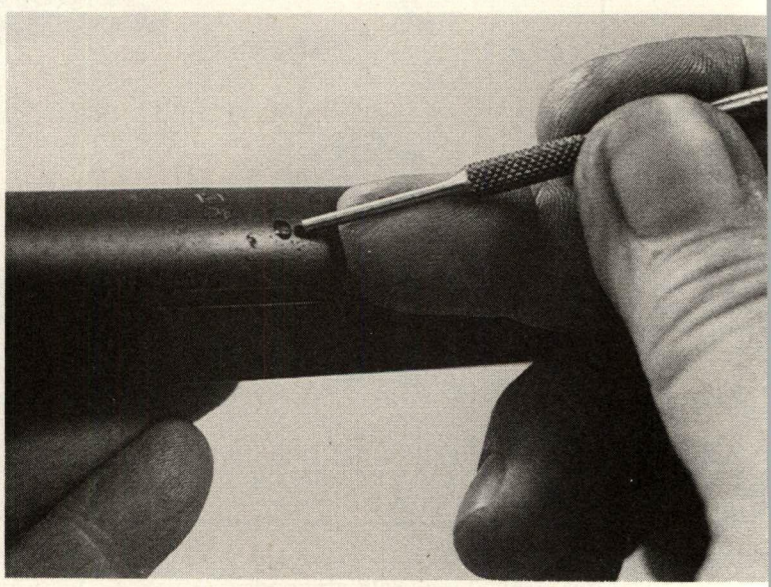


9. Drifting out the large pin at the center will allow removal of the hammer toward the rear.



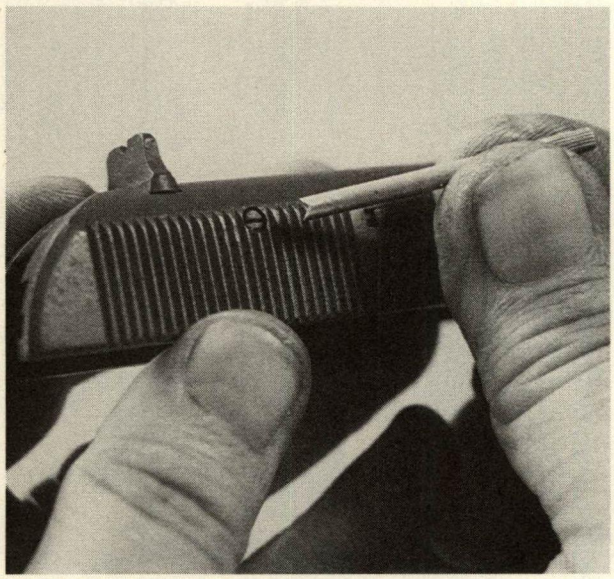


10. Drifting out the small cross-pin at the lower front of the sub-frame will release the sear and its attached spring and the disconnector for removal downward. The flat sear spring is driven into a slot in the sear, and it is not removed in normal takedown.

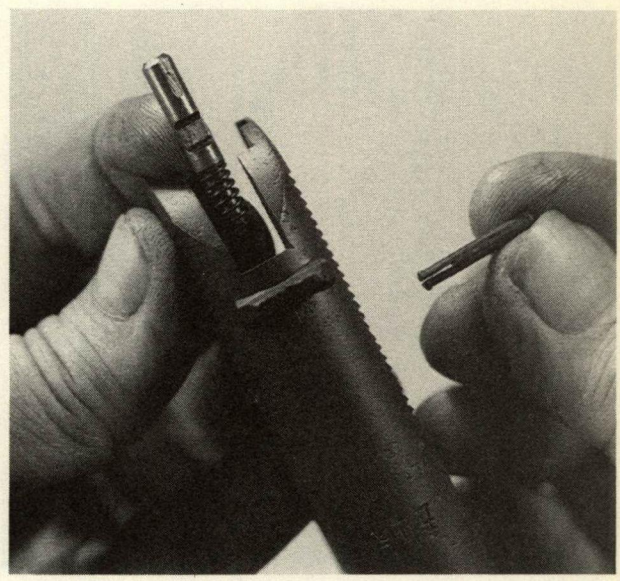


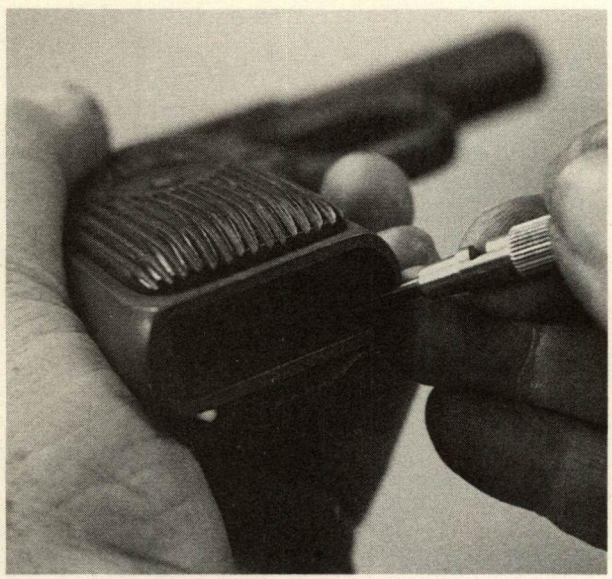
11. The extractor and its spring are retained on the right side of the slide by a vertical pin. This is driven out upward, and the extractor and spring are taken off toward the right.

12. The firing pin and its spring are retained by a cross-pin which has a split and tempered end on the right side. For removal, it is necessary to make a tool with a V-cut in its end, to compress the split-pin for release. A nail of the proper diameter can be used for this. After the split head of the pin is unlocked, use a smaller drift to drive it out.

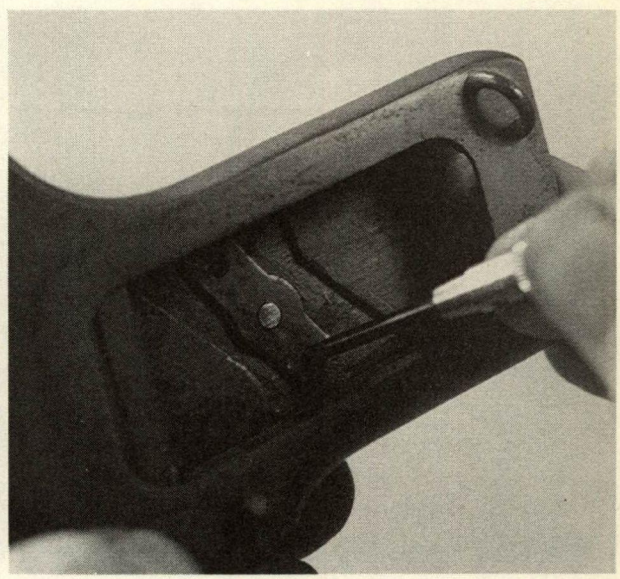


13. Remove the firing pin and its spring toward the rear.



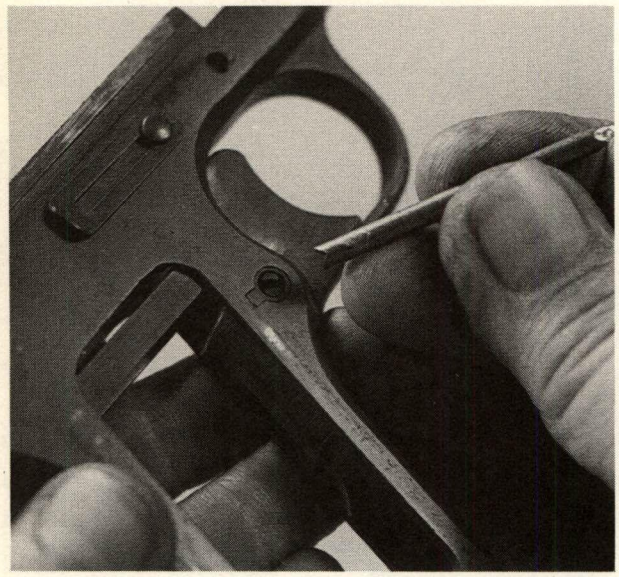


14. Inside the left grip panel is a notched lever. Use a tool to move the lever toward the rear, and take off the left grip panel.

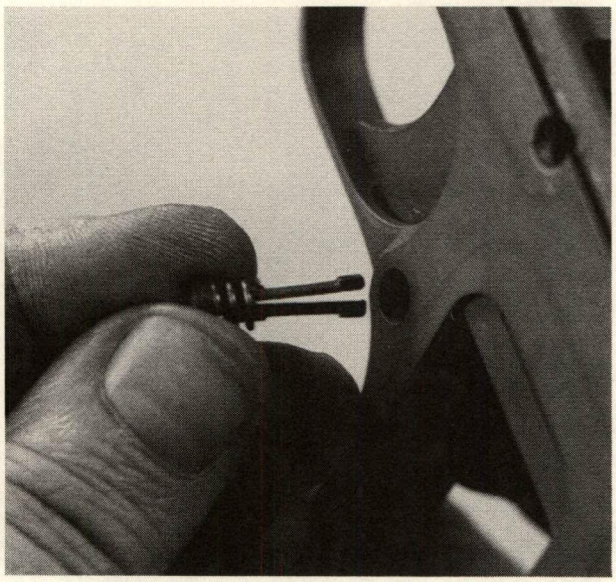


15. Use a tool to turn the retaining plate inside the right grip panel, and remove the grip.

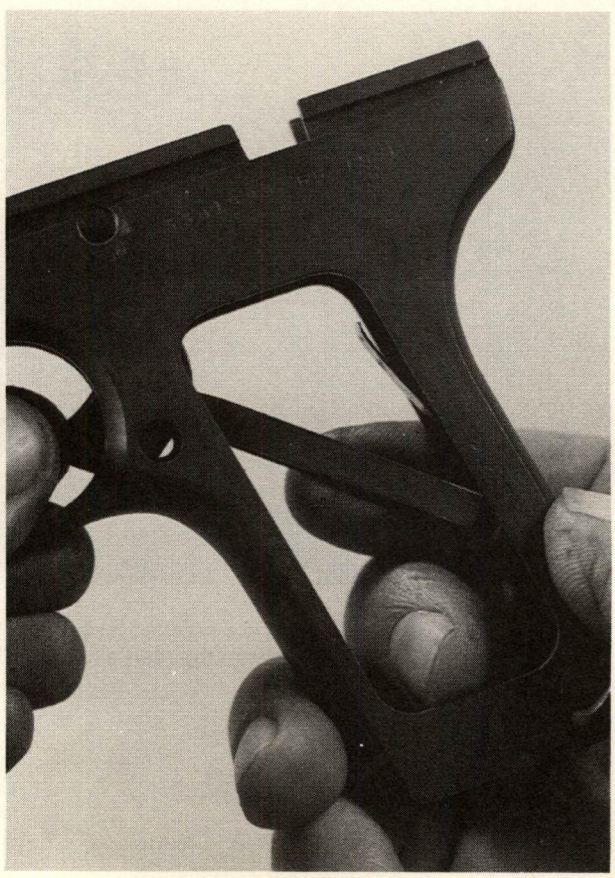
16. To remove the magazine catch, a tool like the one used on the firing pin cross-pin is necessary. This one must be of slightly larger diameter, as shown. Once the split-end is unlocked, use a drift of smaller diameter to drive it out.



17. The catch button and spring are removed toward the left.

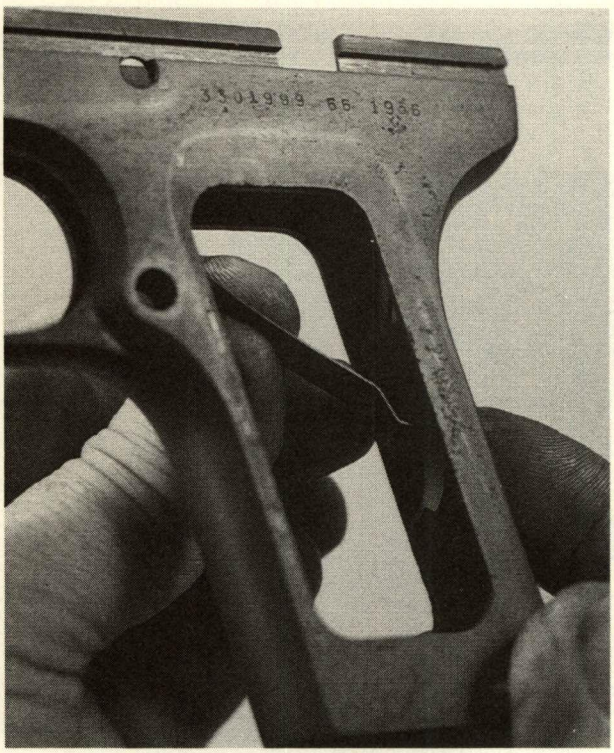


18. The magazine catch is taken off toward the right.



19. Move the trigger bar downward, and remove the trigger through the grip frame opening.

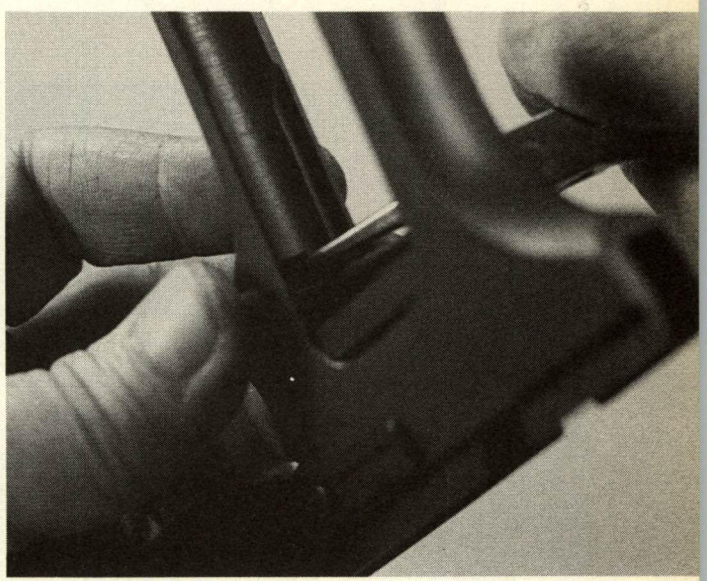
20. Tip the trigger spring forward into the magazine well, and remove it upward.



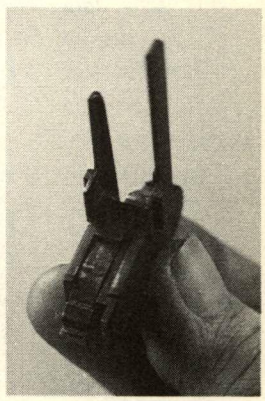
21. The slide-latch retainer can be removed by slightly spreading its spring arms, and taking it off the post upward. Take care to pry the arms only far enough to clear the post.

Reassembly Tips:

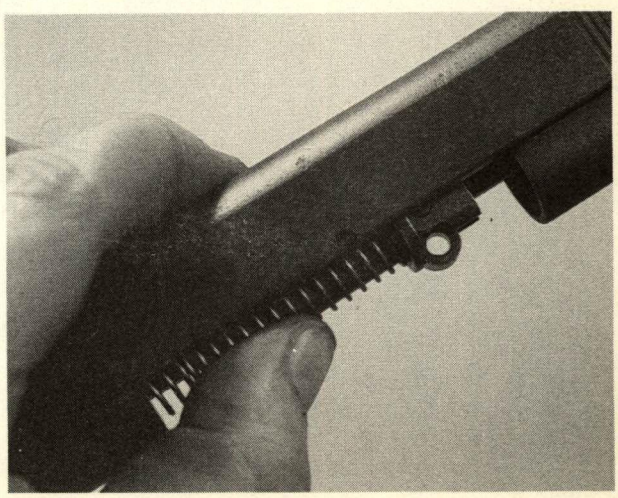
1. To start the split end of the magazine catch back into engagement, use slim pliers to compress the end, working through the grip frame opening.



2. If the sub-frame has been disassembled, be sure the sear, sear spring, and disconnector are put back as shown.



3. When replacing the slide on the frame, hold the recoil spring as shown until it is covered by the frame.



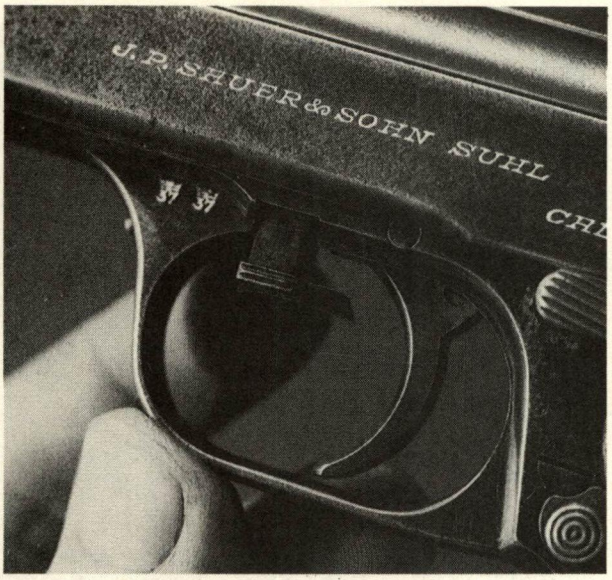
Sauer 38H

Data:	Sauer Model 38H
Origin:	Germany
Manufacturer:	J. P. Sauer & Sohn, Suhl
Cartridge:	32 ACP
Magazine capacity:	8 rounds
Overall length:	$6^{1}/_{4}$ inches
Height:	$4^{3}/_{8}$ inches
Barrel length:	$3^{7}/_{16}$ inches
Weight:	24 ounces

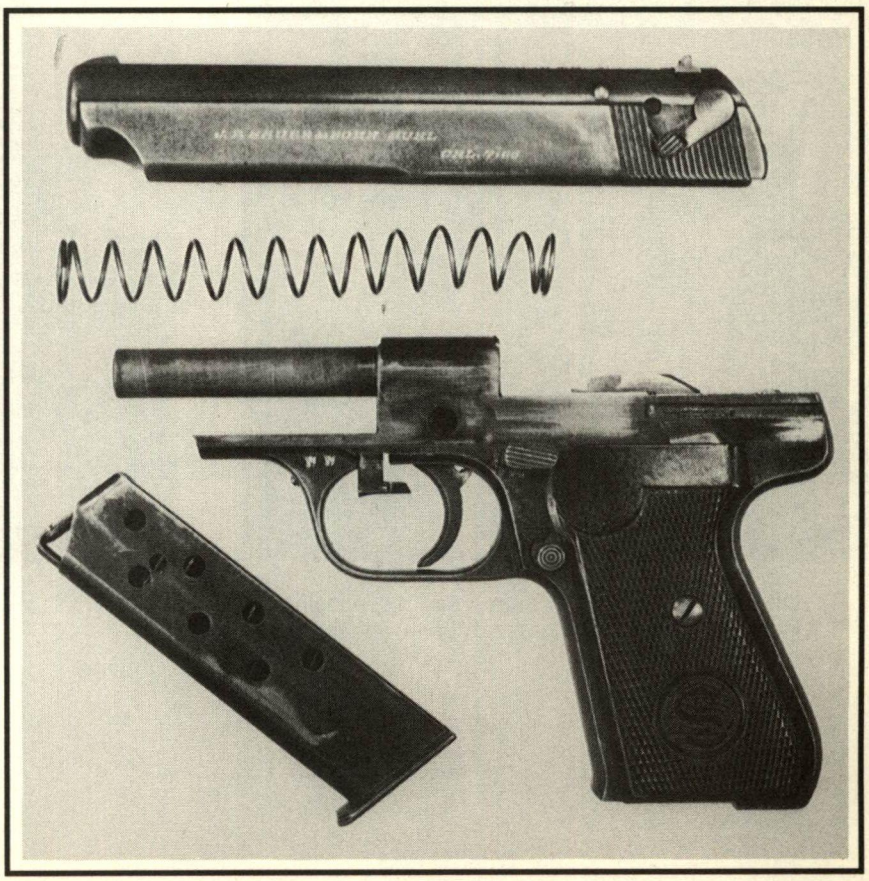
The Model 38H was the first true double-action pocket pistol produced by Sauer, and was an excellent design. Although production did not continue after World War II, certain elements of this design have been used since then in several current guns such as the SIG/Sauer P220 and P230, and the Heckler & Koch P9S. The most outstanding point of the design is the cocking/decocking lever on the left side, by which the internal hammer can be cocked or safely lowered.

Field Strip:

1. The takedown-latch is located inside the trigger guard, just forward of the trigger, and has serrated wings extending to each side. With the internal hammer cocked and the magazine removed, pull the takedown-latch straight down until it stops.



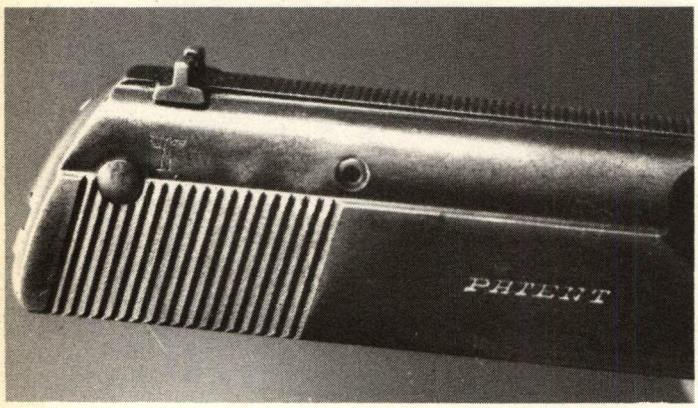
2. Draw the slide all the way back, lift it at the rear, and allow it to run forward off the barrel and frame. Remove the recoil spring from the barrel. **Gun is now field-stripped.**

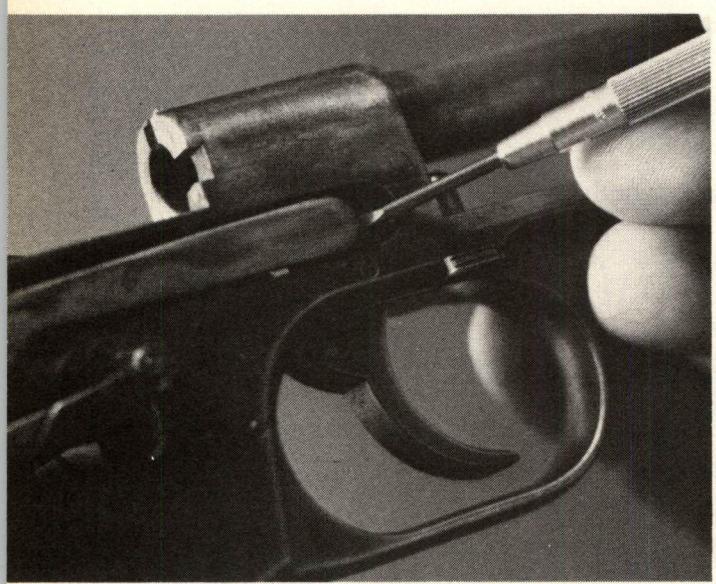


Sauer 38H field-stripped

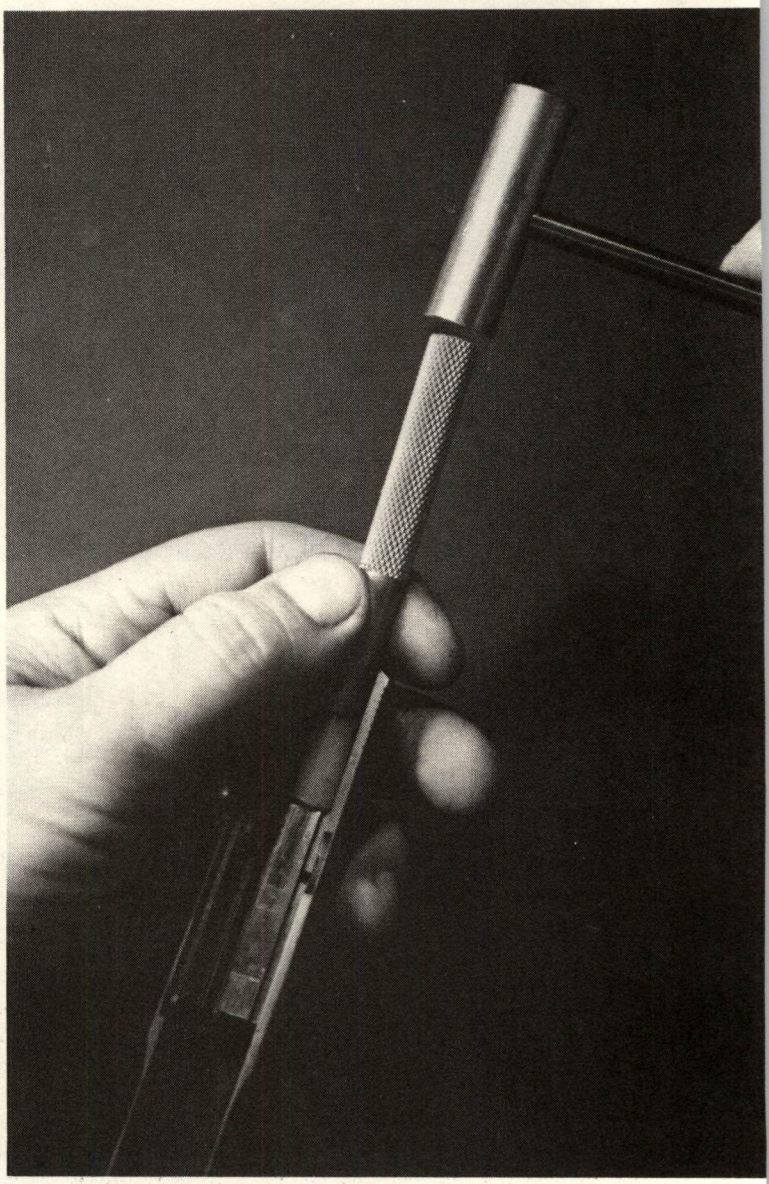
Detail Strip:

3. With the safety-lever in either position, tap the exposed right end of its cross-shaft with a non-marring tool and remove the safety toward the left side. **Caution:** *The safety spring and plunger are mounted in the rear of the safety-lever on the left side. Restrain them as the part is moved out, and take care that these small parts are not lost.* The large cross-pin just above the front of the slide serrations retains the breechblock in the slide and is driven out toward the left. A drift punch that fits its center depression should be used, as the right end of the pin is slightly spread to retain it.



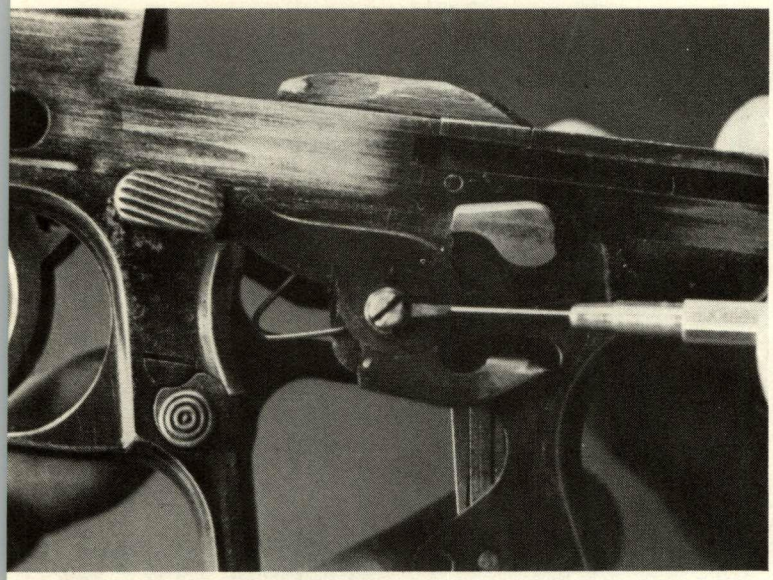


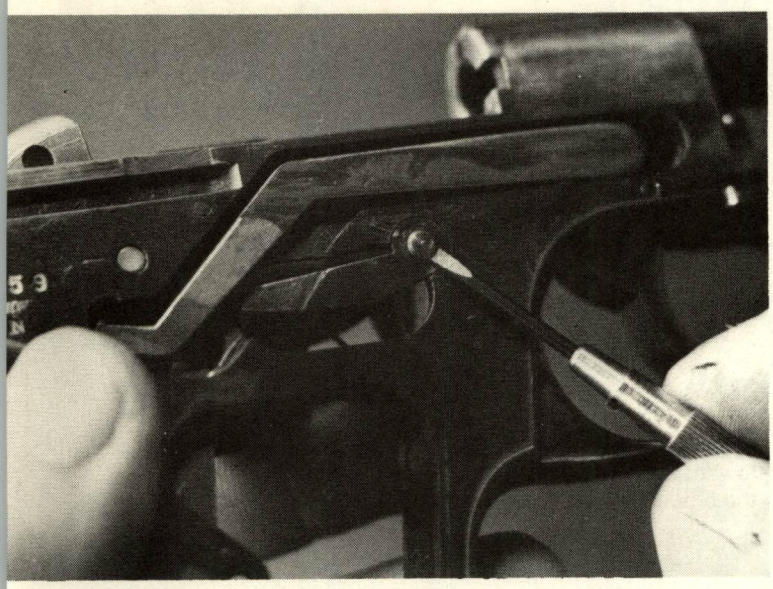
4. After the cross-pin is removed, use a nylon drift punch to move the breechblock forward. When it has cleared its recesses in the slide, the breechblock can be removed. The firing pin and its spring will be released when the cross-pin is driven out, so take care that they are not damaged while the breechblock is being driven out of the slide. When the block is out, the extractor and cartridge indicator are easily taken off.



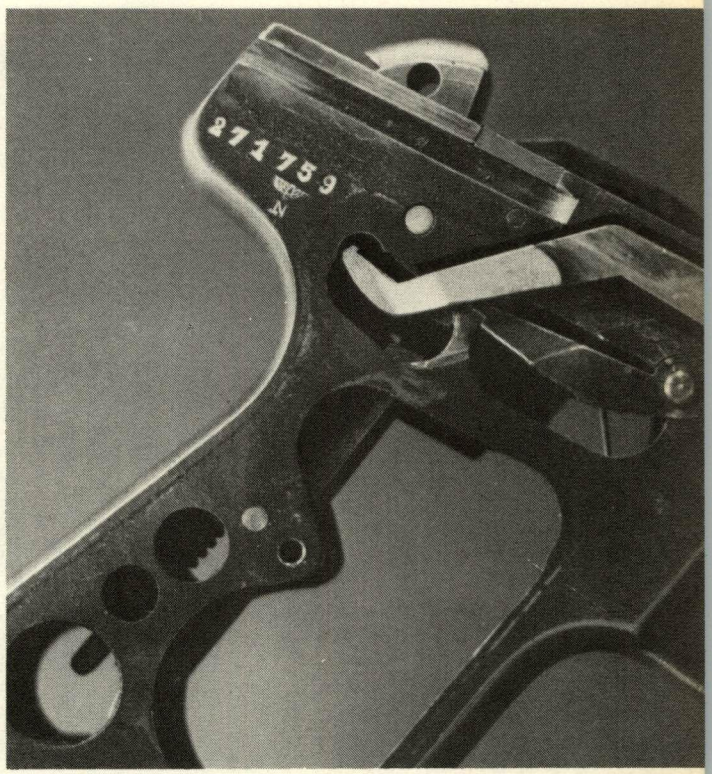
5. Lift the front end of the trigger bar, disengaging its inner studs from the trigger and spring, and remove it from the right side.

6. The cocking lever is retained by a circular spring-clip which encircles a groove in its pivot stud. When prying off the clip, hold a fingertip over it to prevent its escape. Removal of the lever will free the decocking piece which extends toward the rear, and the round-wire torsion spring which powers both. All of these are removed toward the left.



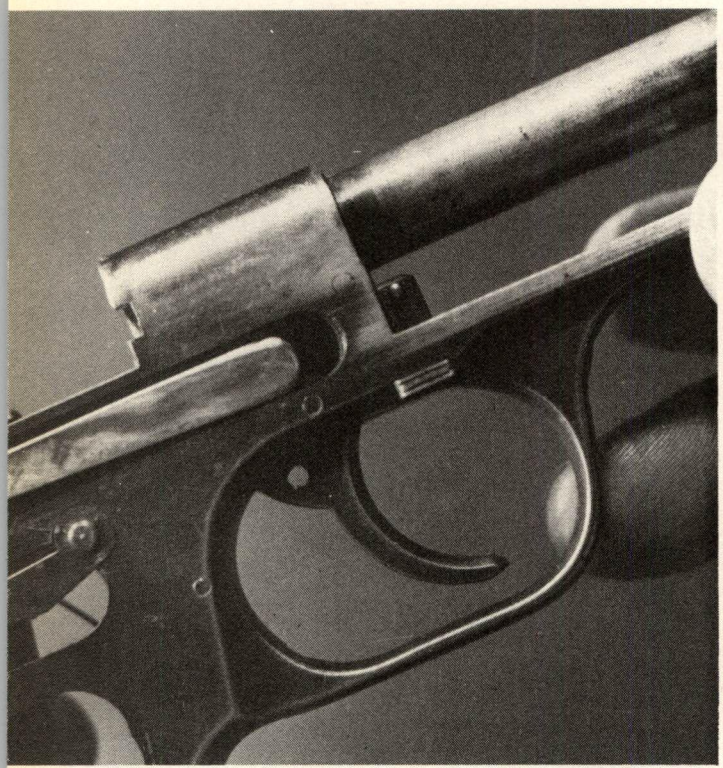


8. The magazine safety stud is riveted inside the frame and must be driven out from the inside to release the safety-lever and its spring. The screwdriver in the photo is for indication purposes only—the stud should not be pried.

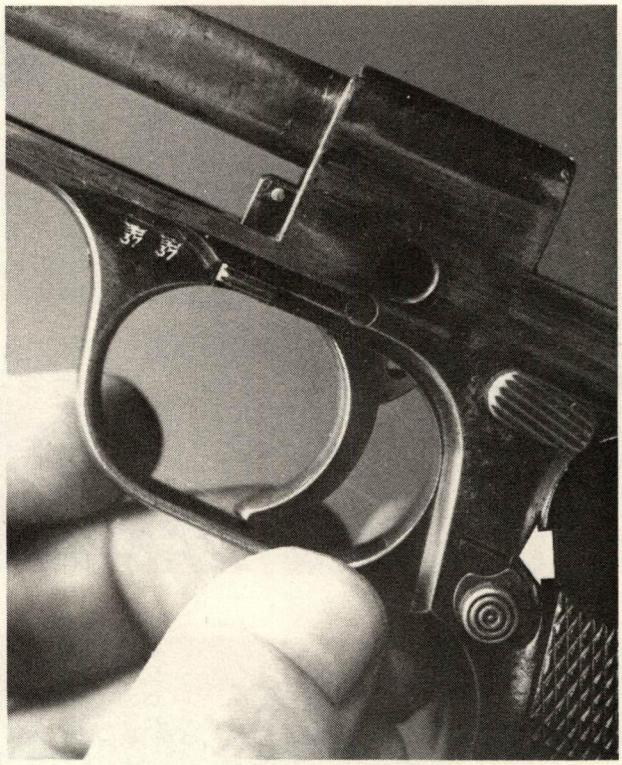


7. The large pin above the tip of the trigger bar is the hammer pivot. Cocking the hammer will expose a small cross-hole in the tip of the hammer strut, visible in the large hole at the lower rear of the grip frame. Insert an opened paper clip in the small hole, then lower the hammer gently, trapping the hammer spring and strut. The hammer pivot can now be pushed out toward the left side of the frame and the hammer removed from the top. Insert a tool from the top to bear on the hammer strut, depress it slightly, and remove the paper clip from the hole in the lower tip of the strut. **Caution:** *Spring is compressed; be careful and ease the strut and spring out the top.* The lower pin, near the grip screw hole, is drifted out to free the sear and sear spring. When removing the sear, take care not to lose the sear disconnector and its spring, resting in a recess on the left side of the sear.

9. The trigger and its spring and spring bushing are retained by a cross-pin which must be driven out toward the left. Removing the bushing from the trigger will release the spring. The takedown-latch spring and plunger are retained by a hollow nut located in the upper front of the trigger guard. This nut requires a split-end screwdriver for removal.



10. After removal of the latch spring and plunger, driving out the small pin at the top of the latch will allow its removal downward, into the interior of the guard. Backing out the screw beside the magazine release button (arrow) will free the release and its spring for removal toward the left.



Reassembly Tips:

When replacing the trigger bar, insert a small tool through the large hole above the trigger pin on the left side and depress the rear arm of the trigger spring to engage the underside of the grooved spring stud on the trigger bar.

When replacing the breechblock in the slide, use a slave pin to hold the firing pin in place while the block is driven toward the rear. The short slave pin is then driven out as the breechblock cross-pin is installed.

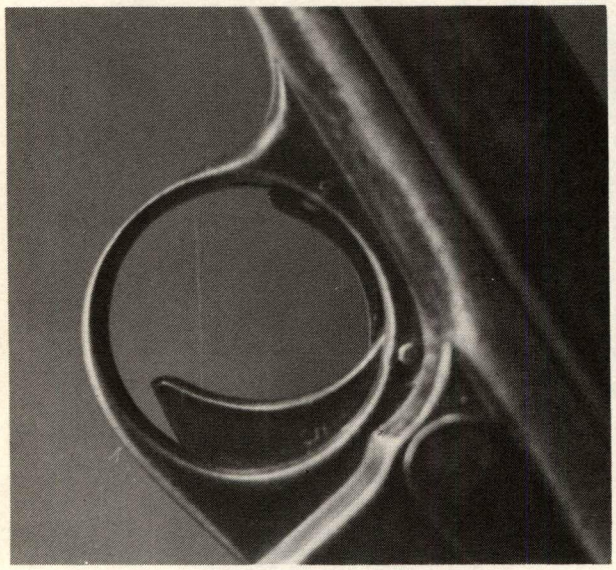
Sauer 1913

Data:	Sauer Model 1913
Origin:	Germany
Manufacturer:	J. P. Sauer & Sohn, Suhl
Cartridge:	32 ACP
Magazine capacity:	7 rounds
Overall length:	$5^{9}/_{16}$ inches
Height:	$3^{7}/_{8}$ inches
Barrel length:	$3^{1}/_{16}$ inches
Weight:	20 ounces

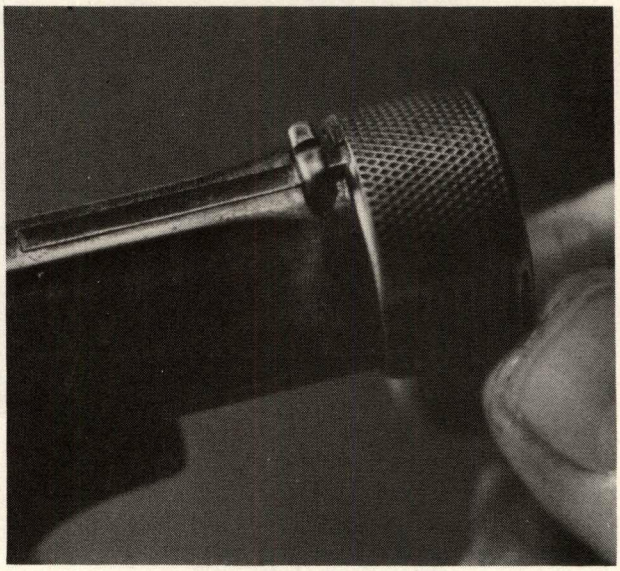
The first of the true pocket pistols made by Sauer, the Model 1913 was later offered in a smaller version chambered for the 25 ACP round. The pistol is an excellent design, very small and compact for its caliber in the 32 version, but is obsolete by today's standards because of its lack of an external hammer or double-action trigger system. Finely made of the best materials in the old German tradition, the Model 1913 Sauer is now mostly in the realm of the collector.

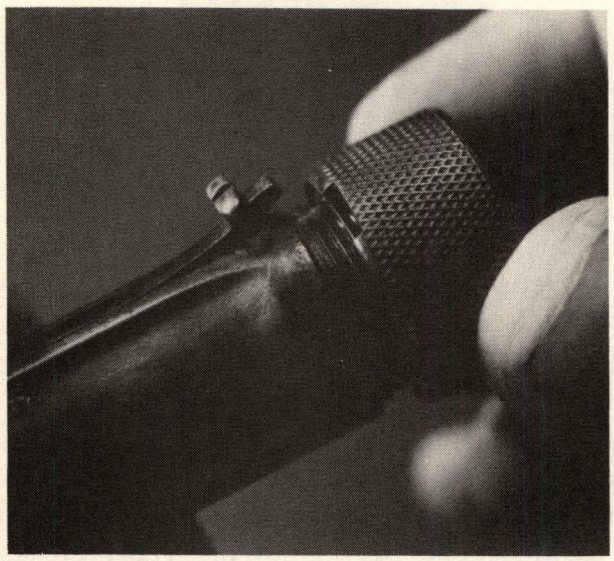
Field Strip:

1. The slide hold-open latch is located inside the top of the trigger guard, just forward of the trigger. Remove the magazine, and draw the slide all the way back while exerting upward pressure on the slide latch, locking the slide open.

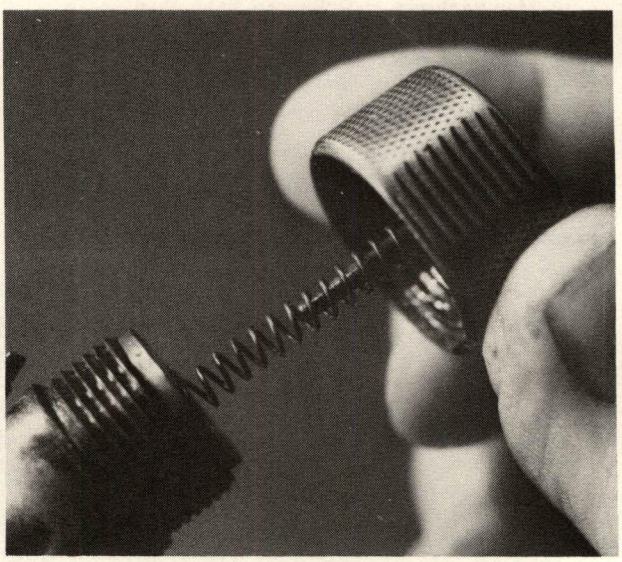


2. The rear sight is also the takedown-latch. Push it straight down, and hold it down while turning the bolt knob to the left to unscrew it from the slide.



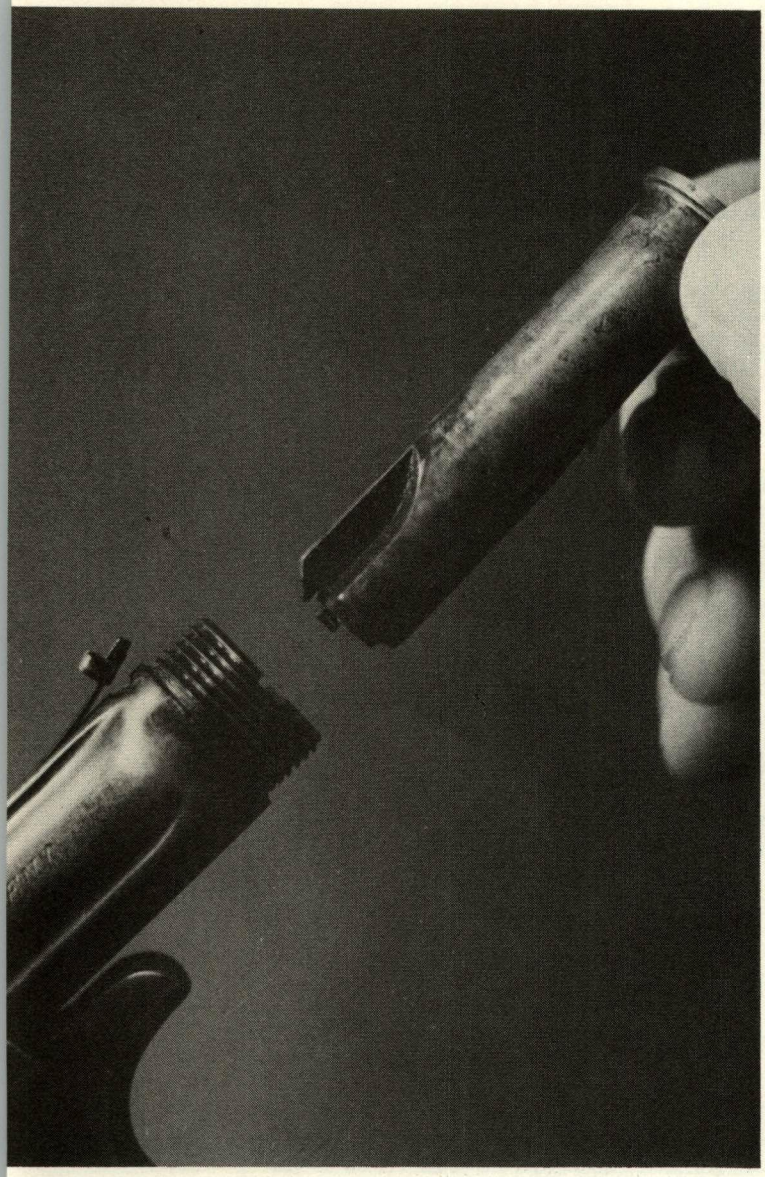


3. When the edge of the knob has cleared the tail of the latch, pressure on the sight can be released. Continue unscrewing the knob and remove it.

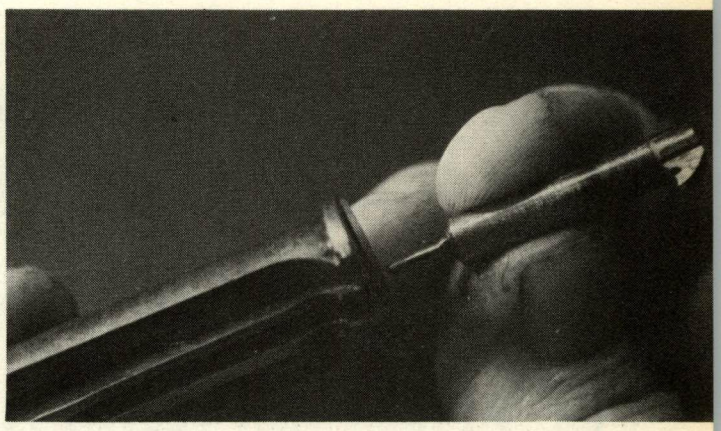


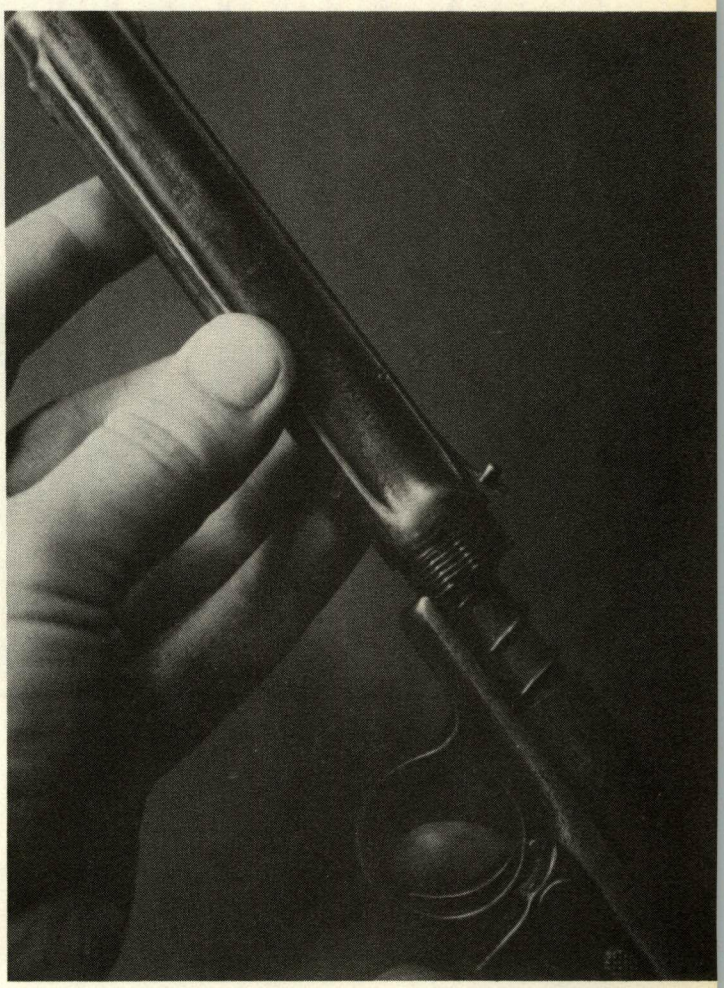
4. The striker spring guide is permanently riveted to the inside of the knob, and the striker spring will come out with the knob.

5. Remove the breechblock from the rear of the slide.



6. Remove the striker (firing pin) from the rear of the breechblock.



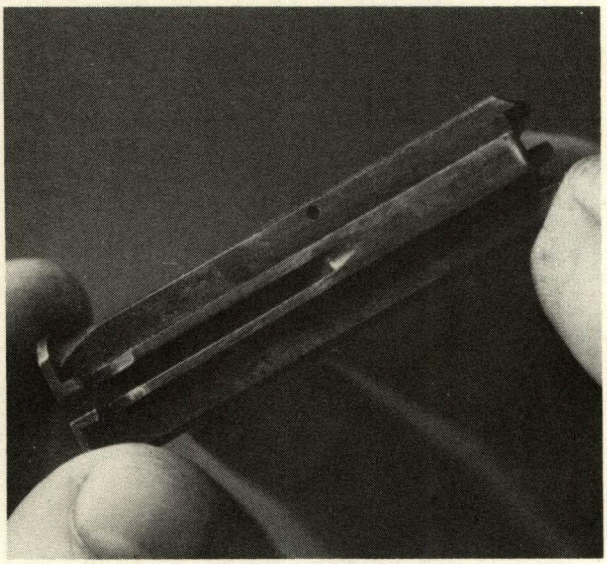


7. Holding the slide against the tension of the recoil spring, pull the trigger to release the slide-latch and remove the slide and recoil spring forward from the frame. The rear sight/takedown-latch is cross-pinned to the top rib of the slide, and can be removed by drifting out the pin. **Gun is now field-stripped.**

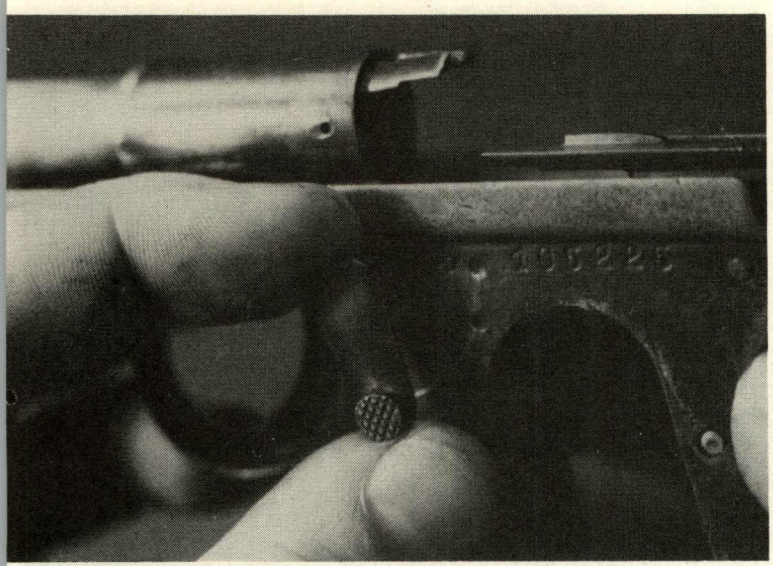
Sauer 1913 field-stripped

Detail Strip:

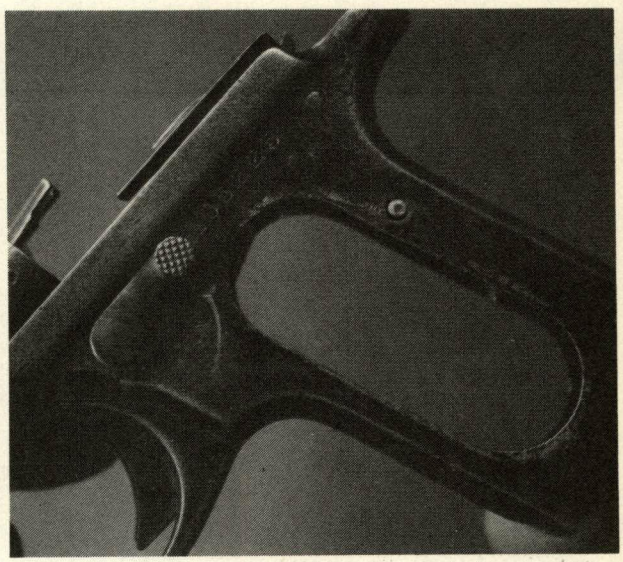
8. Drift out the small vertical pin on the right side of the breechblock from the bottom to top to free the extractor. The extractor is tempered to be its own spring.



9. The slotted pieces at the center of the grips are not screws. They are attached to plates on the inside of the grips, the ends of which lock into recesses in the grip frame. The one on the left grip is turned to the left, and the one on the right grip to the right. Give each a half-turn, and the grips can be lifted from the frame.

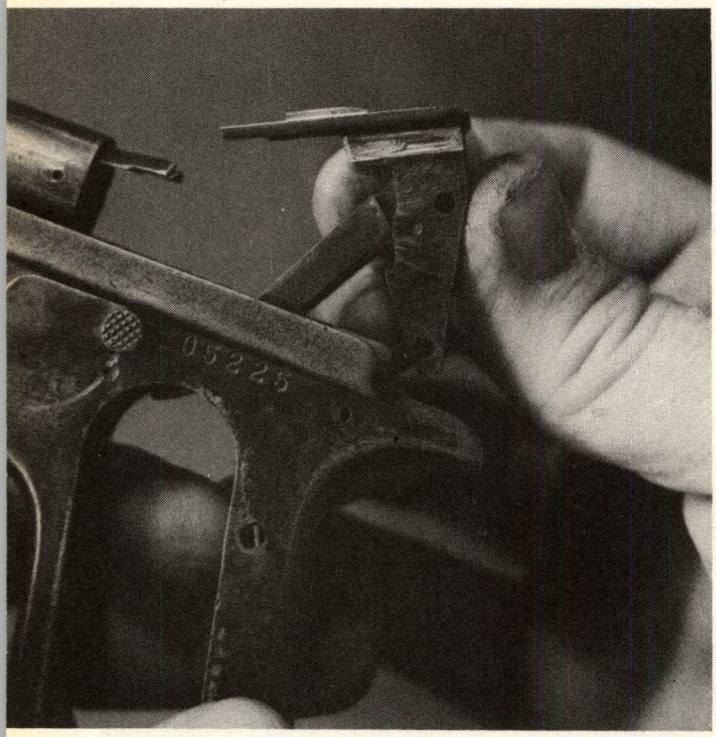


10. Turn the safety-lever down beyond its on-safe position to nearly vertical, its forward edge aligning with the drop-off of the frame, and it can be removed toward the left.

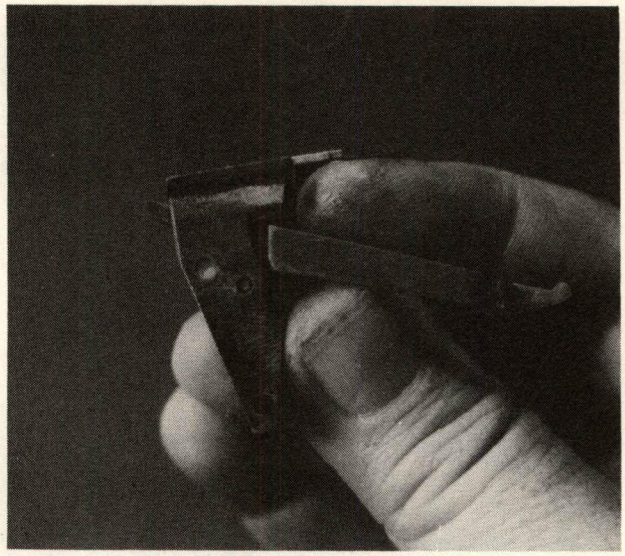


11. The two large pins at the upper rear of the frame retain the sub-frame which contains the combination trigger bar and sear, and forms the ejector at the top.

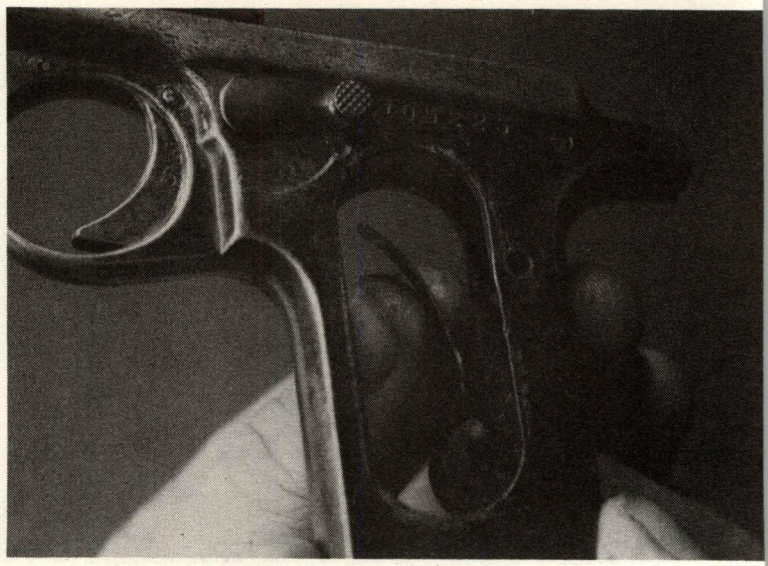
12. Drift out the two cross-pins, and remove the sub-frame and trigger bar/sear upward and toward the rear.



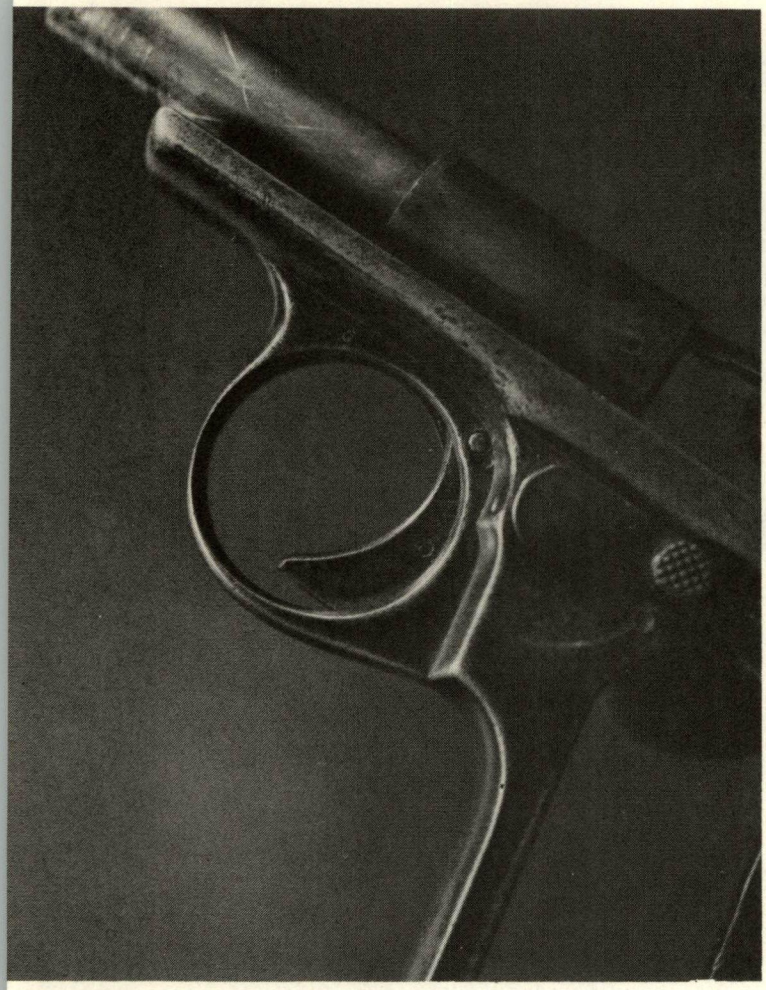
13. Drifting out the small cross-pin in the sub-frame will free the trigger bar/sear. Note carefully its relationship to the sub-frame before removal, as it is possible to re-install it upside down, making reassembly impossible.



14. Removal of the sub-frame will release the sear/trigger bar spring, which also powers the magazine catch. The spring is removed from inside the magazine well. Drifting out the small cross-pin at the lower rear of the grip frame will release the magazine catch for removal.

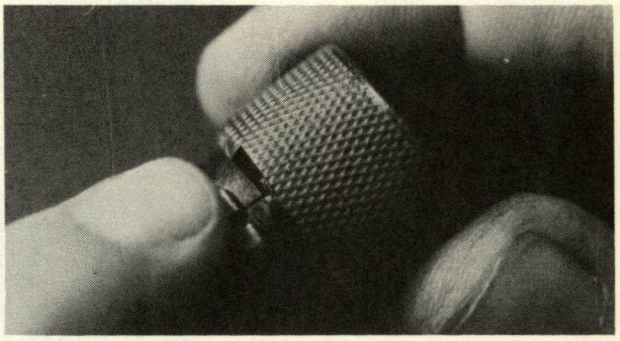


15. Drifting out the trigger pivot pin will free the trigger and one end of the slide latch. To release the slide latch for removal, drive out the smaller pin in the forward part of the trigger guard. The barrel can be unscrewed from its housing on the frame, but removal is not advisable except for replacement.

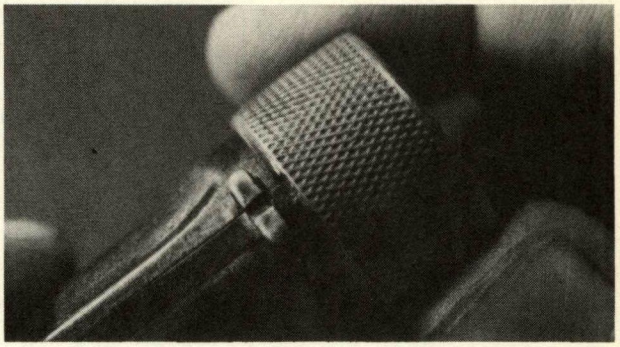


Reassembly Tips:

1. When screwing the knob back on the rear of the slide, it is not necessary to depress the sight/latch until the edge of the knob nears its locking tail. On the final turn, when the wide notch in the knob passes the tail, depress the sight to enter the notch.



2. Release the sight, and complete the turn, until the tail snaps up into its small locking notch at the top.



When lowering the sub-frame back into the grip frame, be sure the tip of the sear/trigger bar spring engages behind the rear shoulder of the bar. It will be necessary to insert a tool through one of the side openings and flex the spring slightly to the rear while the final seating of the sub-frame is done.

When replacing the breechblock in the slide, it may be necessary to reach in with a tool and depress the sear to clear the front of the breechblock. As an alternative to this, the breechblock can be set on top of the frame in its normal closed position, and the slide drawn back over it.

Savage Model 1908

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Savage Model 1908 also apply to the following guns.

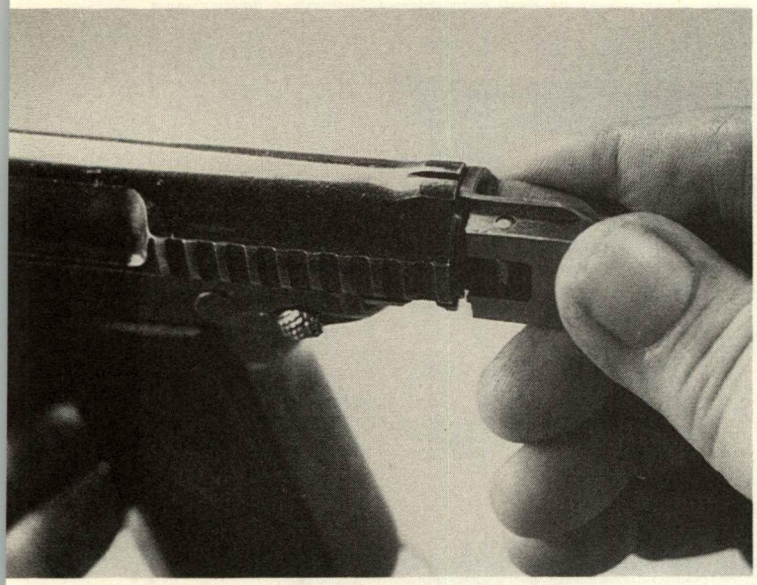
Savage Model 1915 **Savage Model 1917**

Data:	Savage Model 1908
Origin:	United States
Manufacturer:	Savage, Utica, New York
Cartridge:	32 ACP, 380 ACP
Magazine capacity:	10 rounds
Overall length:	$6\frac{1}{2}$ inches
Height:	$4\frac{3}{8}$ inches
Barrel length:	$3\frac{3}{4}$ inches
Weight:	22 ounces

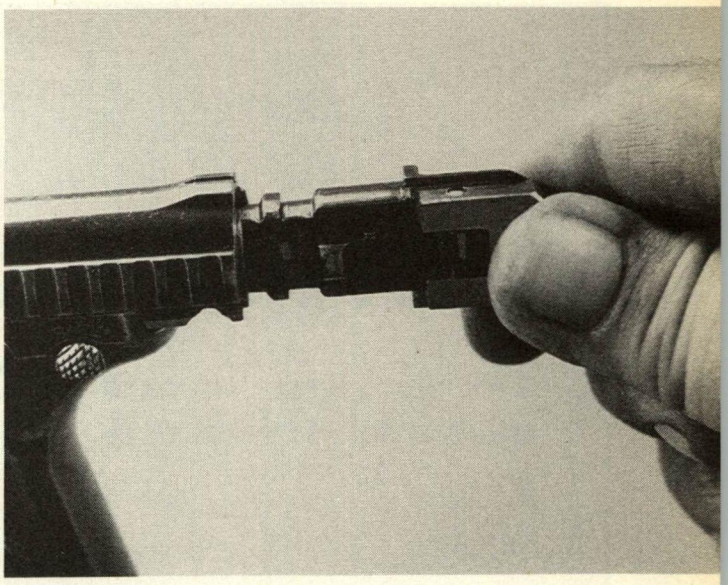
The model designation of the Savage 32 and 380 pistols has long been a debated point. Using the date of the definitive patent, some call the gun the Model 1907. Others use the 1905 patent date that appears on the pistol, or the year it appeared on the market in quantity, 1910. I have always thought the year it began production was appropriate, and have called it the Model 1908. A later pistol, the Model 1917, has a flared grip frame and a different spur on the striker lever. There was also a "hammerless" version in 1915. For all of these, the instructions will apply.

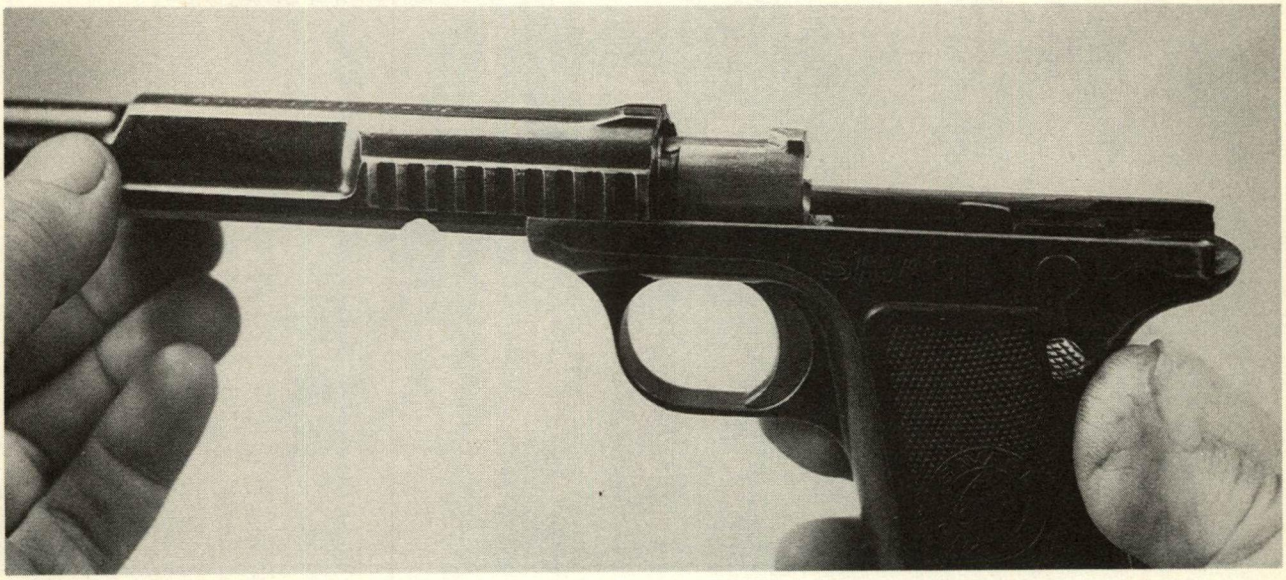
Field Strip:

1. With the magazine removed, use the manual safety to lock the slide in open position. Rotate the slide endpiece clockwise (rear view) one-quarter turn, until it is in the position shown.



2. Slightly depress the cocking-lever, and remove the slide endpiece toward the rear.



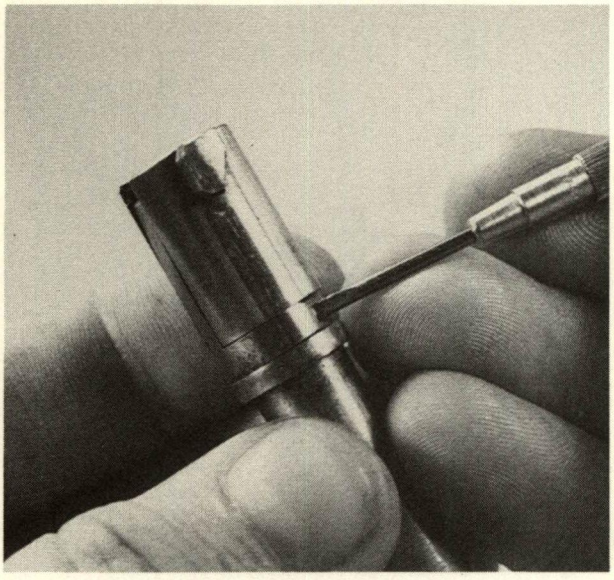


3. Restrain the slide, turn the safety down to off-safe position, and ease the slide off the frame toward the front. The barrel and recoil spring are easily removed from the slide. **Gun is now field-stripped.**

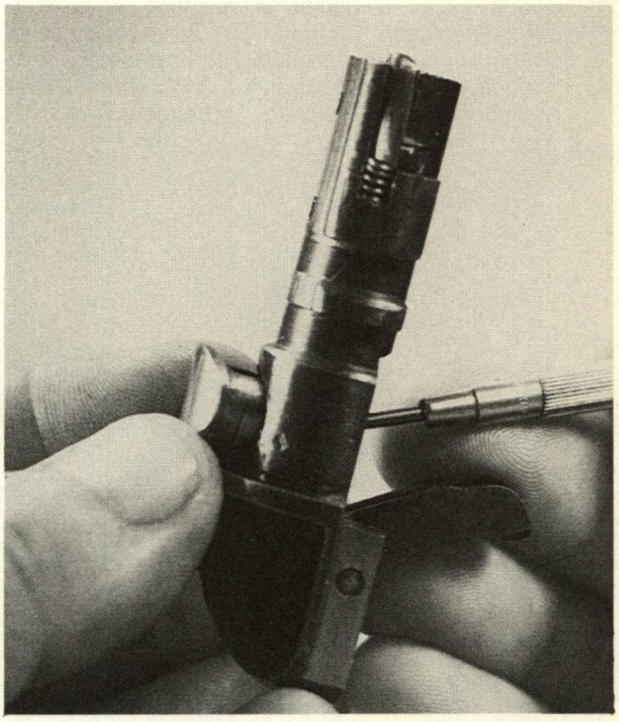
Savage Model 1908 field-stripped

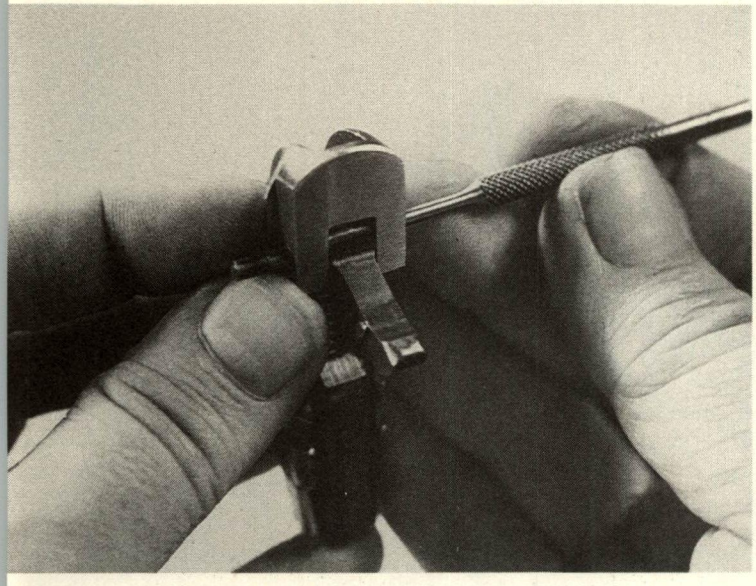
Detail Strip:

4. If the barrel is equipped with a cartridge indicator, it can be removed by inserting a small tool under one spring-clip arm and gently forcing it off. However, this part is fragile, and is best left in place.

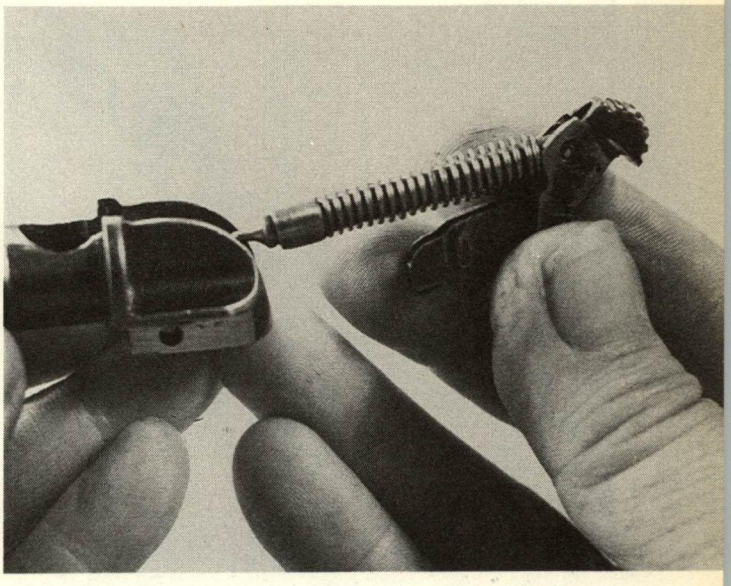


5. Restrain the cocking-lever, trip the sear, and gently lower the cocking-lever to the fired position. Insert a tool to lift the mainspring retainer, pushing it upward, out of its well in the breechblock unit.



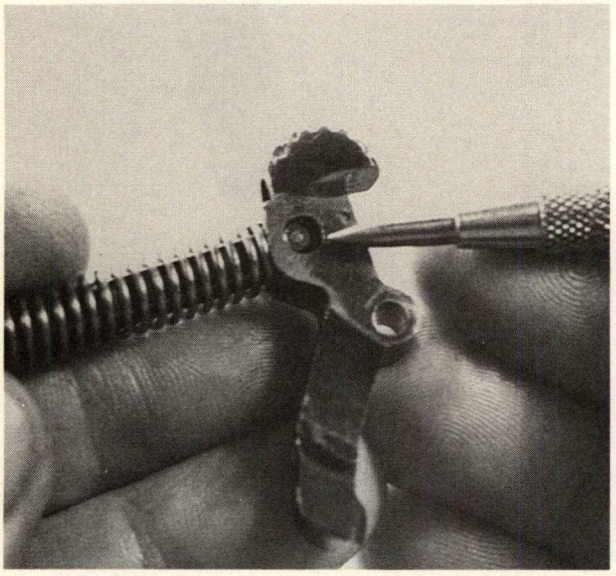


6. Drift out the striker lever cross-pin.

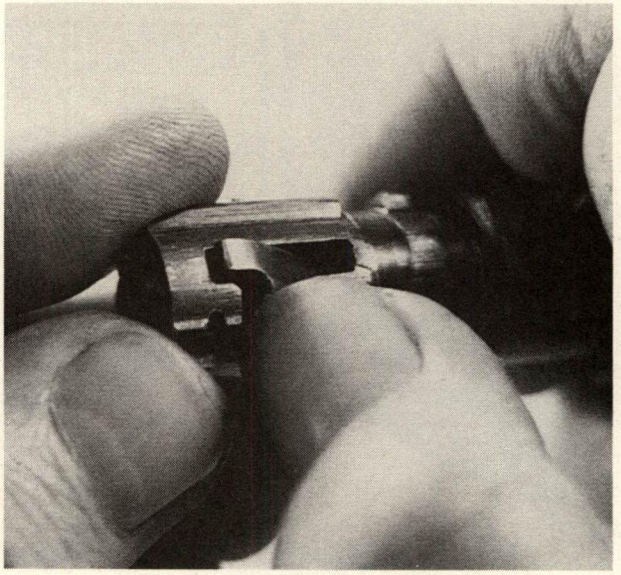


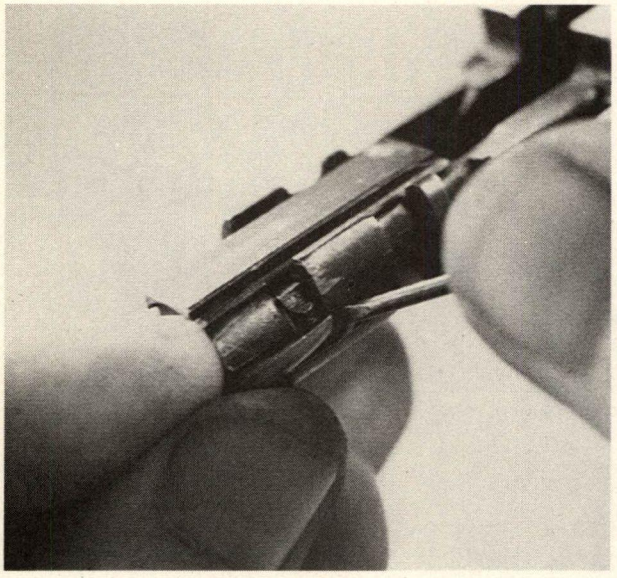
7. Turn the cocking-lever to the cocked position, and remove the lever assembly toward the rear.

8. The striker and its spring can be separated from the lever by slightly compressing the spring and pushing out the cross-pin. **Caution:** *This is a strong spring, and it is under compression. The best method is to grip the lever in a padded vise, and grip the striker with padded Vise-Grip pliers, for better control.*

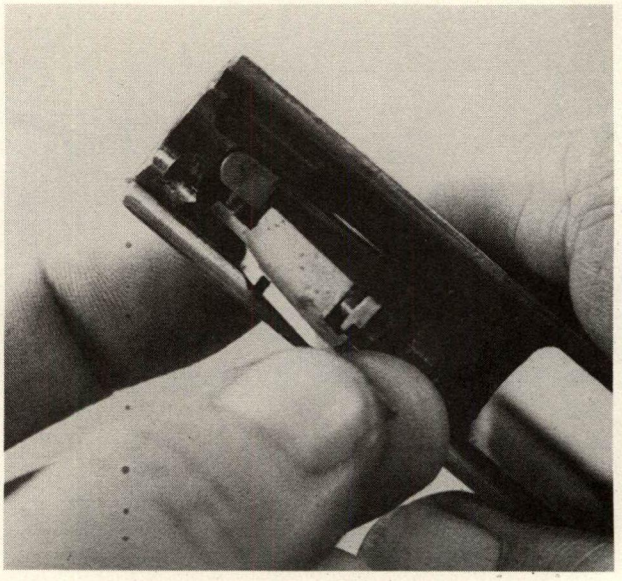


9. Move the sear rearward, then up for removal. Control the small coil sear spring, and remove it from its well in the breechblock.



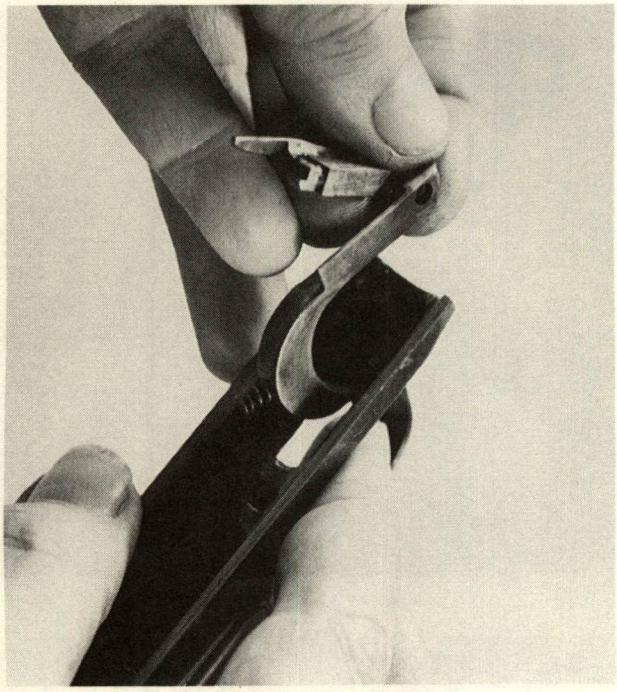


10. Use a tool to retract the extractor spring, and remove the extractor toward the right. Control the spring, and ease it out for removal.

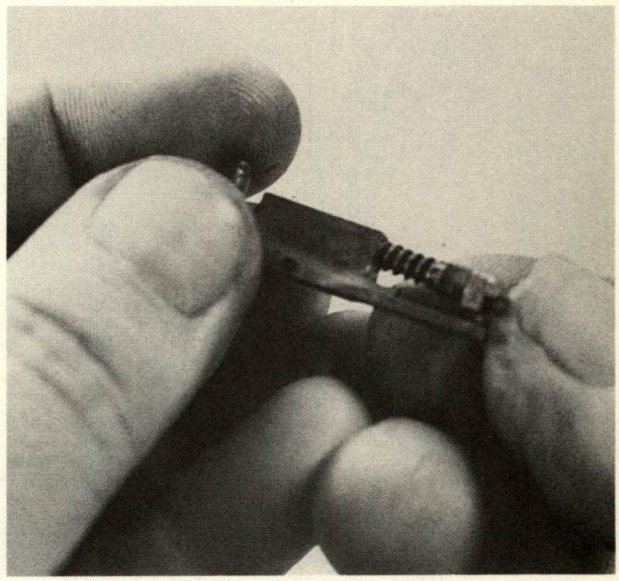


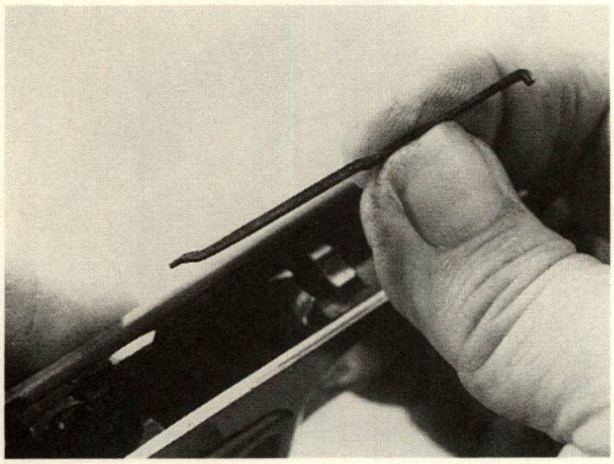
11. Turn the trigger bar upward, and move it toward the left.

12. Move the trigger forward, and remove the trigger and trigger bar upward. Remove the trigger spring from its well in the back of the trigger. The trigger bar is easily separated from the trigger.

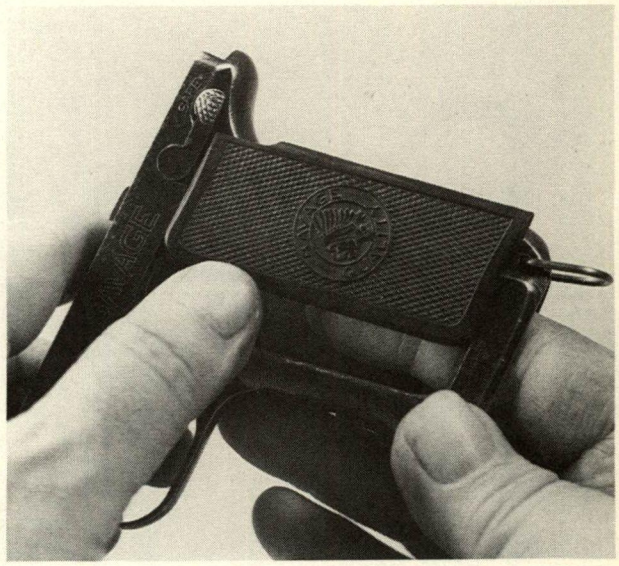


13. Turn the disconnector lock until its flange clears the slot in the trigger bar, and remove the lock piece, spring, and plunger from the trigger bar.



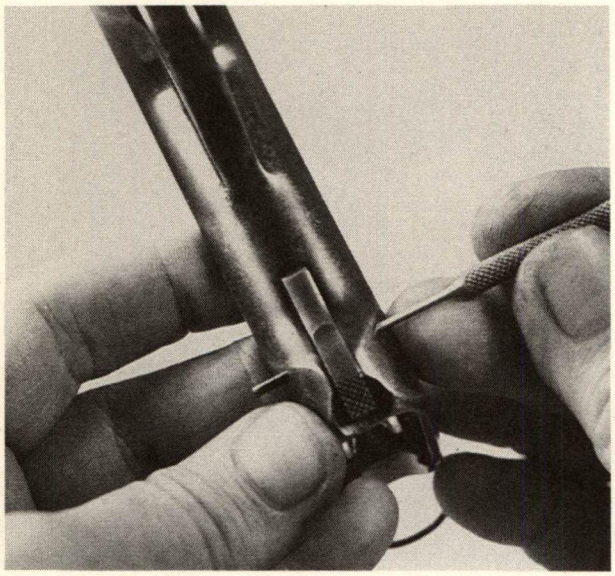


14. If the pistol is equipped with a trigger-block safety, move the bar toward the right, then take it out upward.

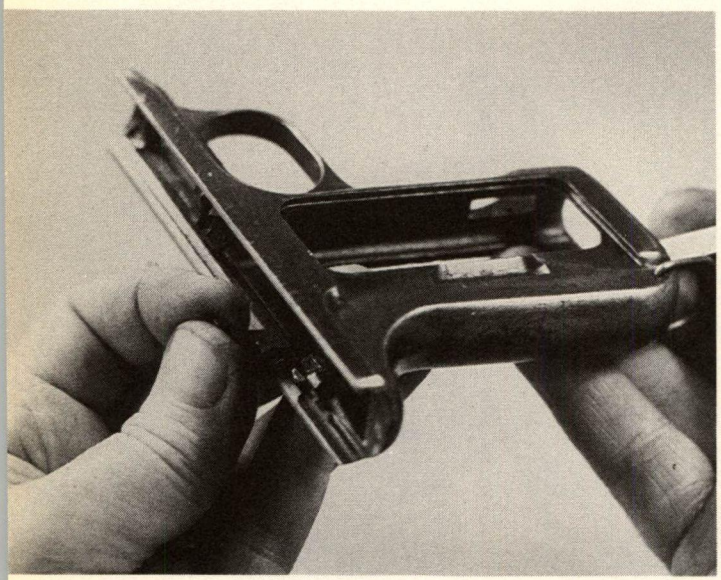


15. With the safety in the on-safe position, insert a fingertip to flex the center of the grip panel very slightly outward, and slide the panel off toward the rear. Original hard rubber grips are fragile, so take care. The other grip is removed in the same way.

16. Push out the cross-pin at the lower front of the grip frame.



17. Remove the magazine catch and its spring toward the front.

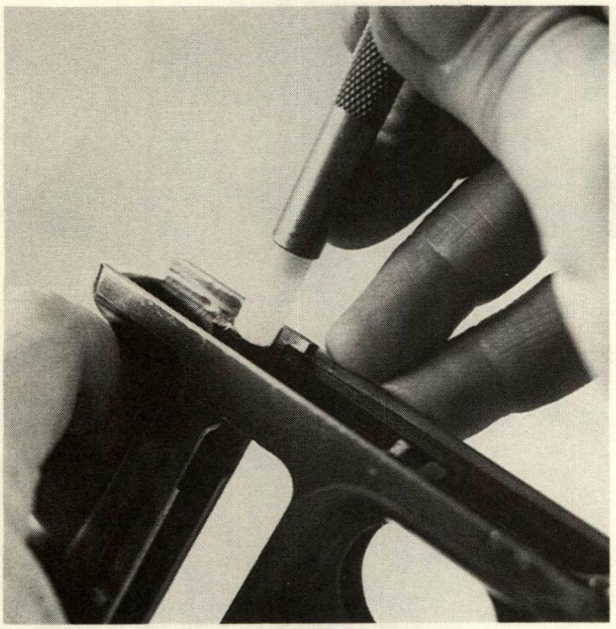


18. Use a long small-diameter drift inside the frame to push the ejector out upward. The safety should be in the on-safe position. The positioning plunger and spring for the safety are housed in the base of the ejector—take care that they aren't lost.

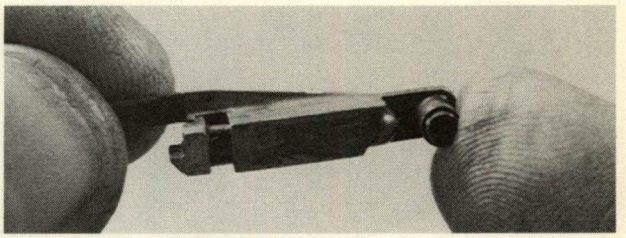
19. Remove the manual safety toward the left.

Reassembly Tips:

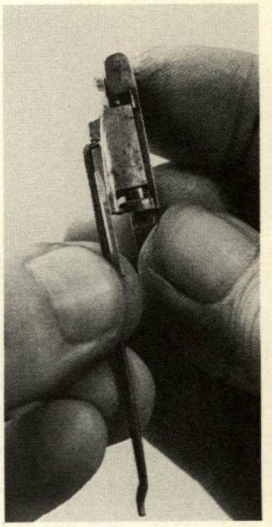
1. When replacing the ejector in the frame, use a non-marring tool, and be sure it is fully seated in the frame.

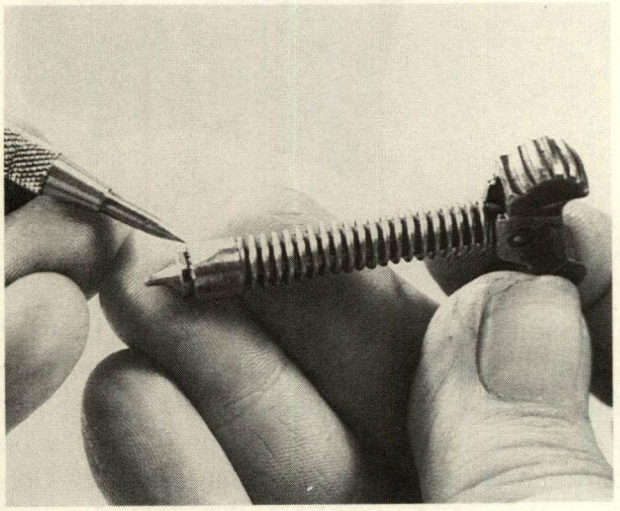


2. The trigger bar unit is shown here, properly reassembled.

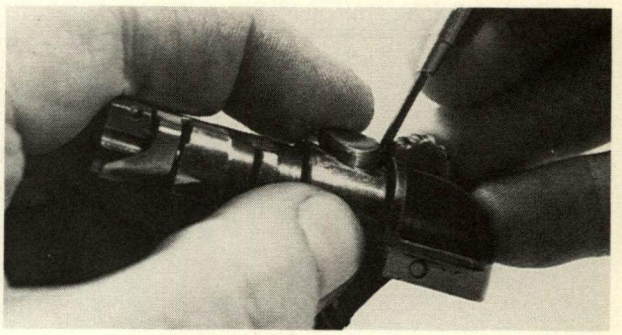


3. In pistols that have the trigger-block safety, the trigger bar is notched for the head of the safety bar. When the trigger bar is turned back down in reassembly, the notch must mate with the safety bar.





4. If you have removed the striker and its spring from the lever, be sure it is put back with the bevelled area near the firing pin on top, as shown.



5. With the striker lever in the fired position, insert a tool to push the spring slightly forward as the spring retainer is moved into place.

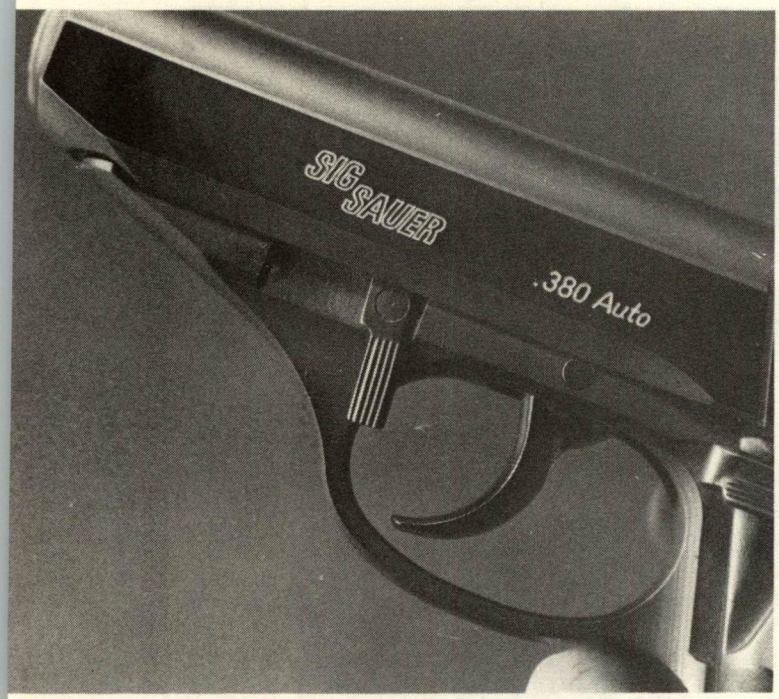
SIG/Sauer P230

Data:	SIG/Sauer P230
Origin:	West Germany
Manufacturer:	J. P. Sauer & Sohn, Eckernforde
Cartridge:	380 ACP
Magazine capacity:	7 rounds
Overall length:	$6^{9}/_{16}$ inches
Height:	$4^{11}/_{16}$ inches
Barrel length:	$3^{5}/_{8}$ inches
Weight:	$16^{1}/_{4}$ ounces

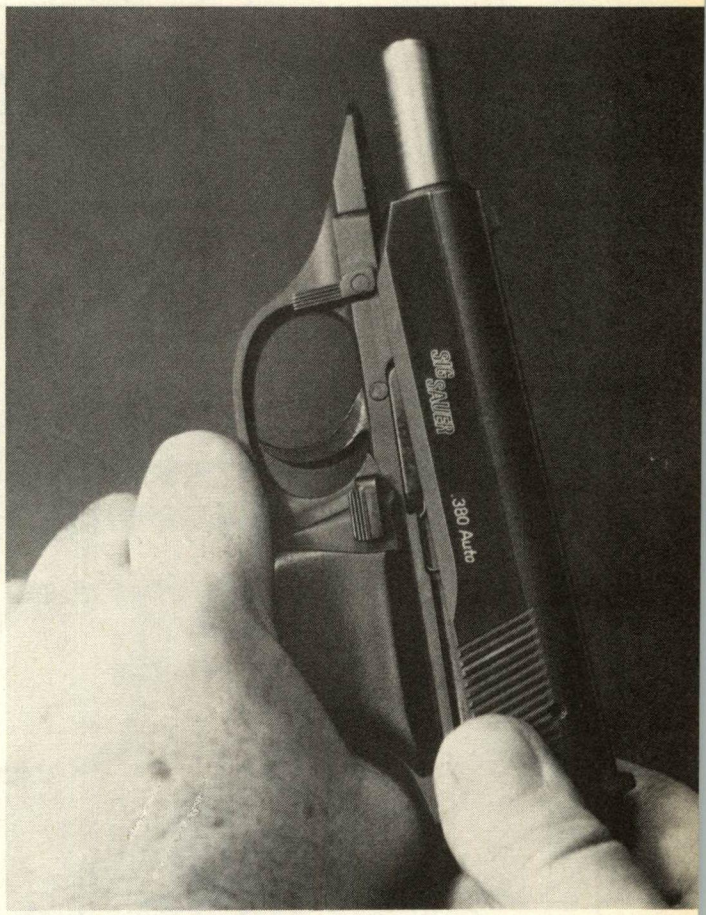
As its name indicates, the SIG/Sauer P230 is the result of a collaboration between the Schweizerische Industrie Gesellschaft (SIG) of Switzerland and the J. P. Sauer company of Germany. Because of current Swiss rules on arms export, the pistols are made by Sauer in West Germany. A simple and elegant design, the P230 has one feature that is reminiscent of the Sauer 38H—a lever on the left side which lowers the hammer. It also has an automatic firing pin block which is cleared only when the trigger is fully to the rear.

Field Strip:

1. The takedown-latch is located on the left side of the frame, just forward of the trigger. Remove the magazine, and cock the hammer. Turn the takedown-latch down to vertical position.



2. Pull the slide all the way back and lift it at the rear to release it from the slide tracks on the frame.

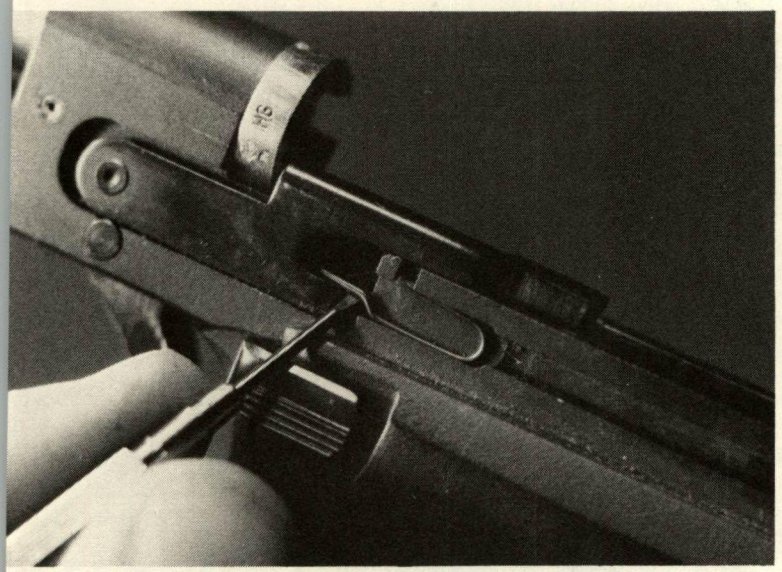


3. Lift the rear of the slide enough to clear the breech face over the barrel, and ease the slide forward off the barrel and frame. Remove the recoil spring from the barrel. **Gun is now field-stripped.**

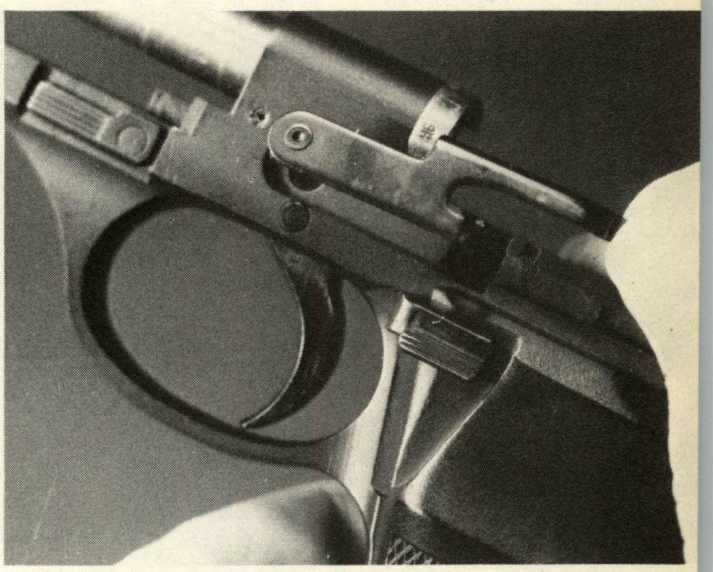
SIG/Sauer P230 field-stripped

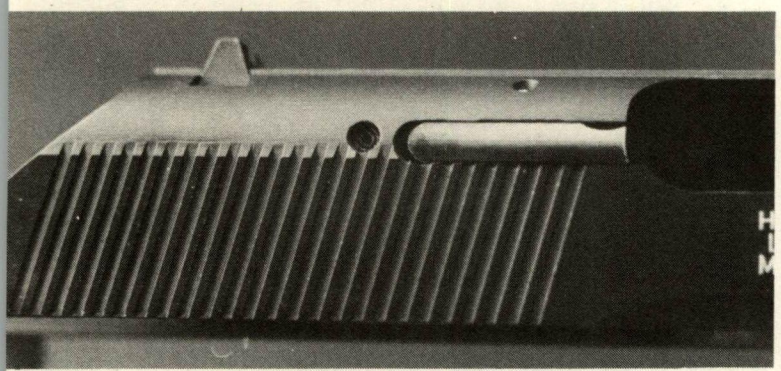
Detail Strip:

4. Lift the lower arm of the ejector/hold-open spring from its recess on the part and remove the spring from its recess in the left side of the frame.

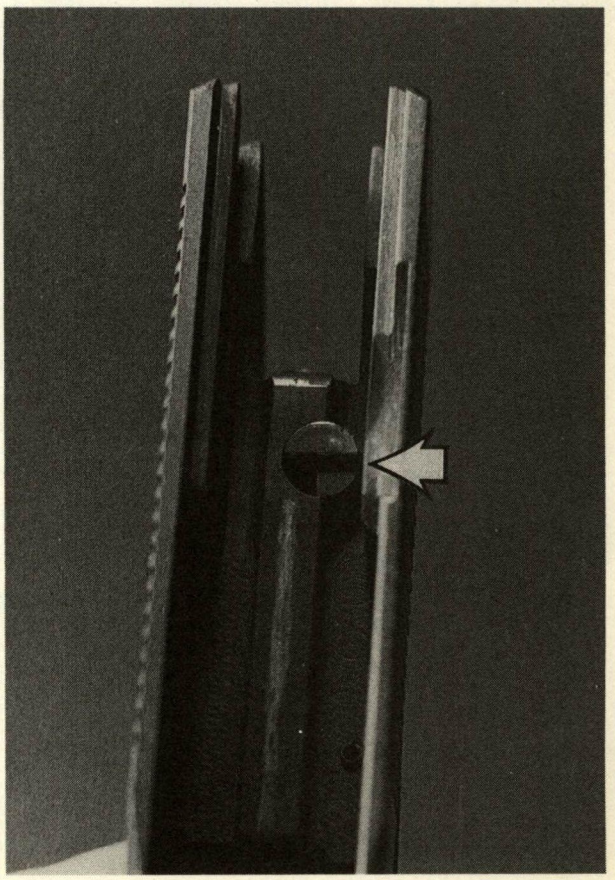


5. Remove the ejector/hold-open from the left side of the frame.



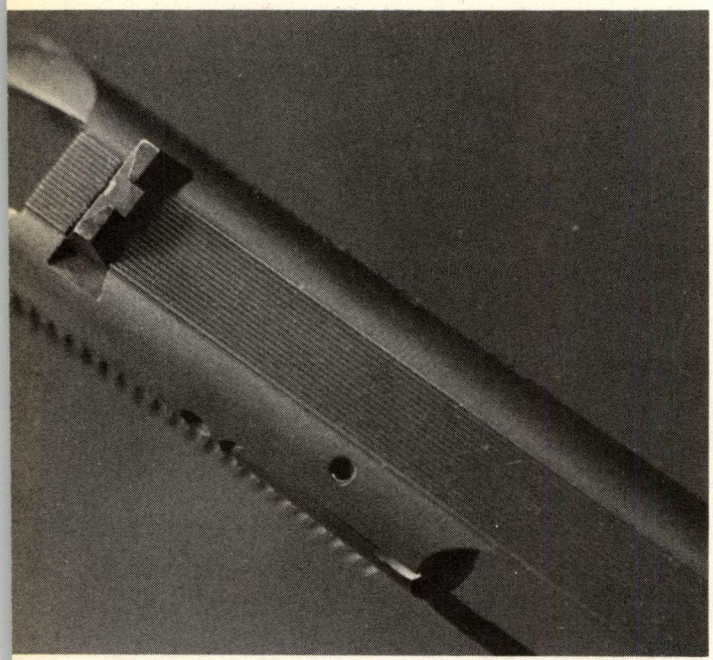


6. A horizontal roll pin retains the firing pin and its spring.

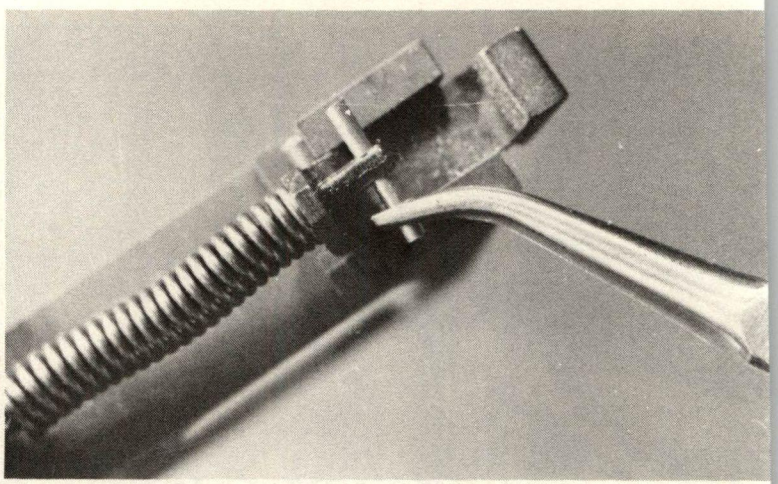


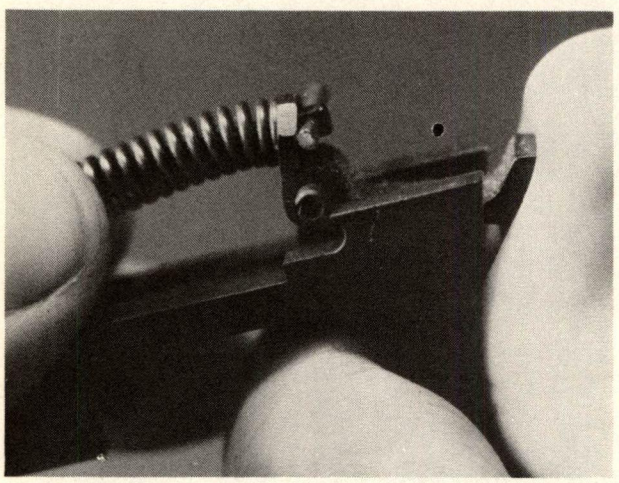
7. Removal of the cross-pin will also release the firing pin block (arrow) and its spring for removal from the underside of the slide.

8. The extractor and its spring are retained by a vertical roll pin.

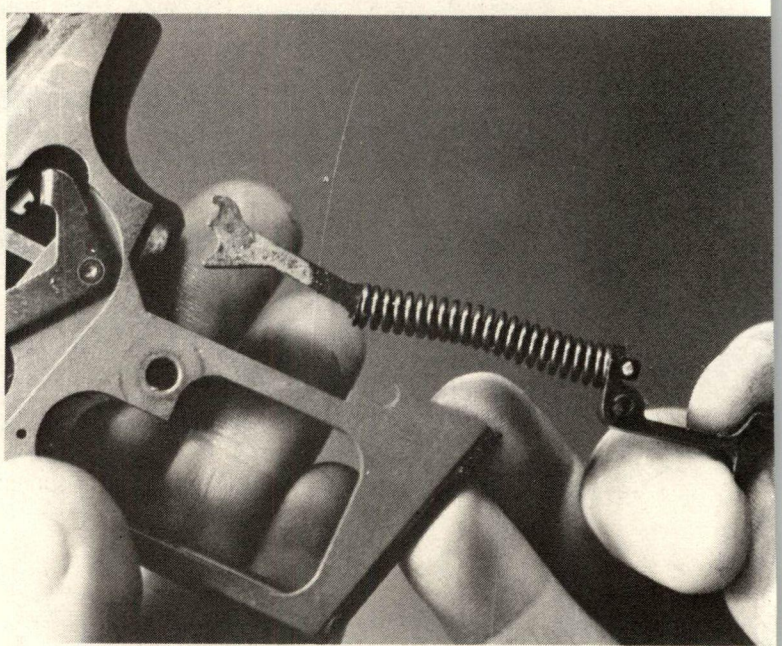


9. After the grips are removed, cock the hammer and insert a keeper pin through the hole in the lower end of the hammer strut. Ease the hammer down and the hammer spring will be trapped on the strut.





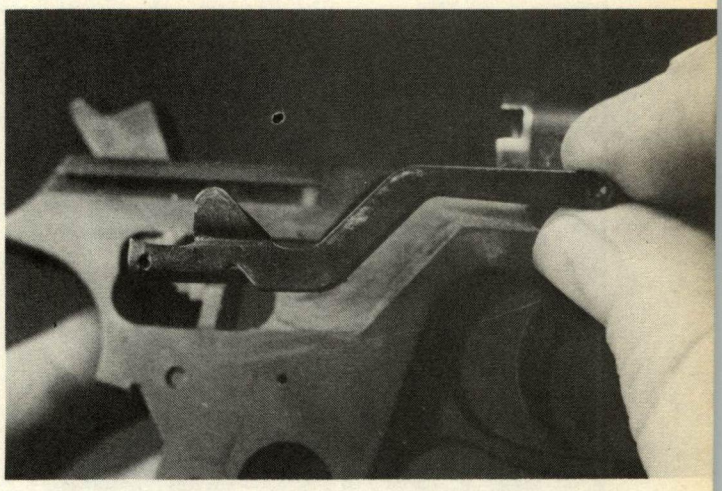
10. Push the magazine catch upward and tip it toward the rear to free its cross-pin from the backstrap.

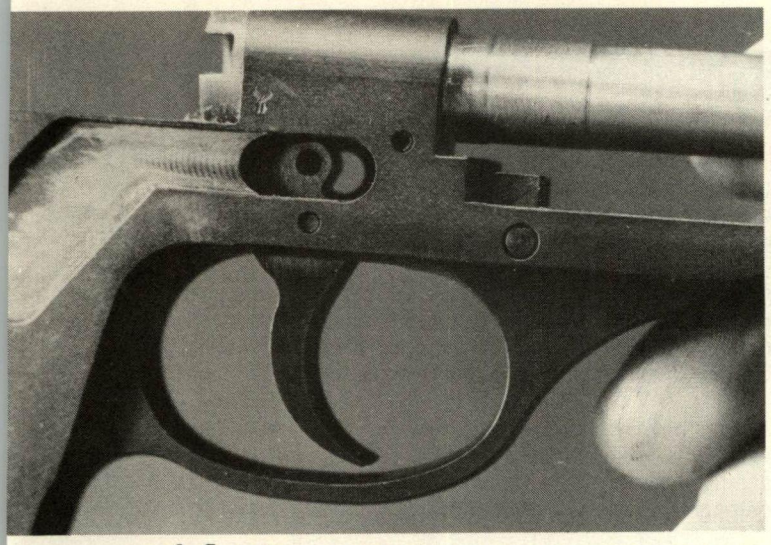


11. Remove the magazine catch, hammer spring, and hammer strut from the rear of the frame. Compressing the spring and taking out the keeper pin will free the strut and spring for removal. **Caution:** *The spring is under tension—remove carefully.*

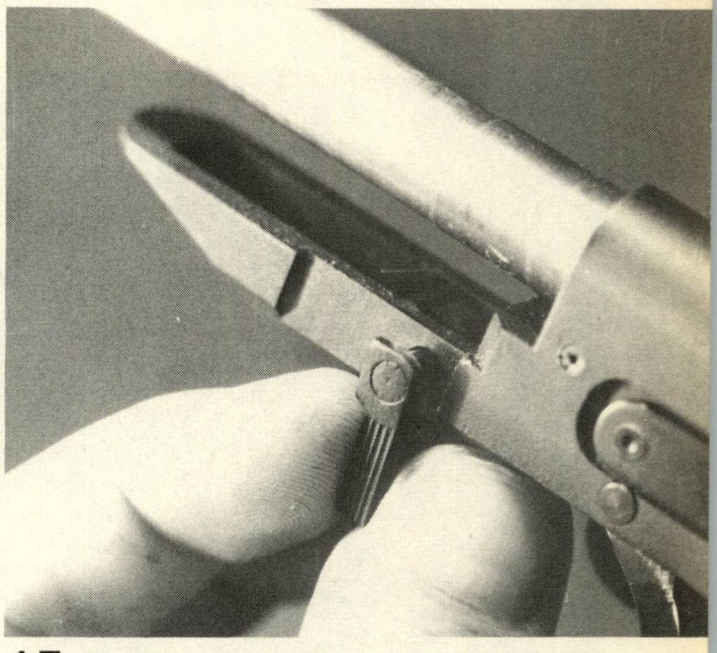
12. The combination spring which powers the trigger and trigger bar is easily detached from its holes in the bar and the frame and can be lifted off toward the right.

13. The trigger bar can now be lifted off toward the right.



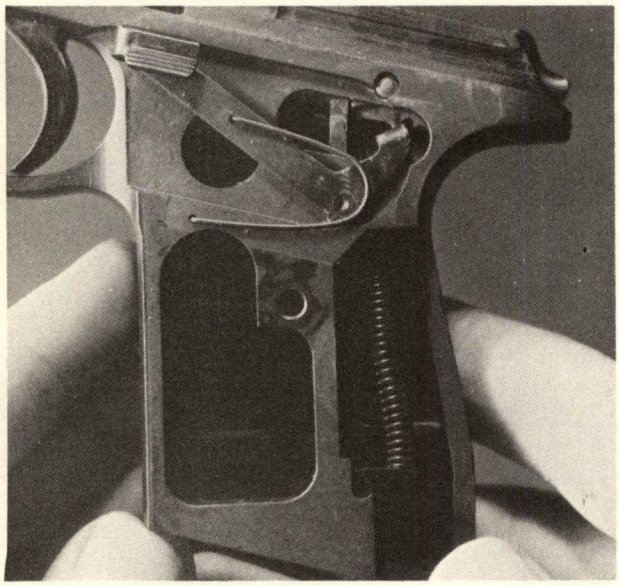


14. The cross-pin which retains the trigger must be drifted out from right to left. A roll pin retains the barrel, and after its removal the barrel can be driven out toward the rear. Barrel removal is not advisable unless replacement is required.

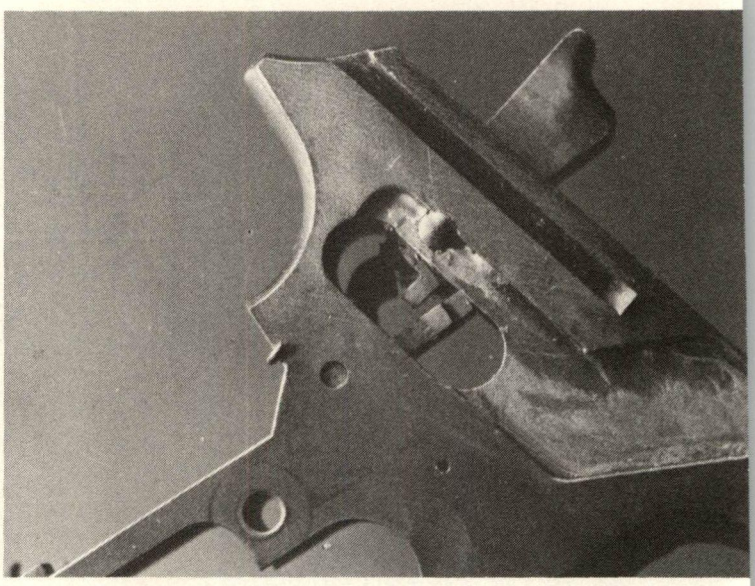


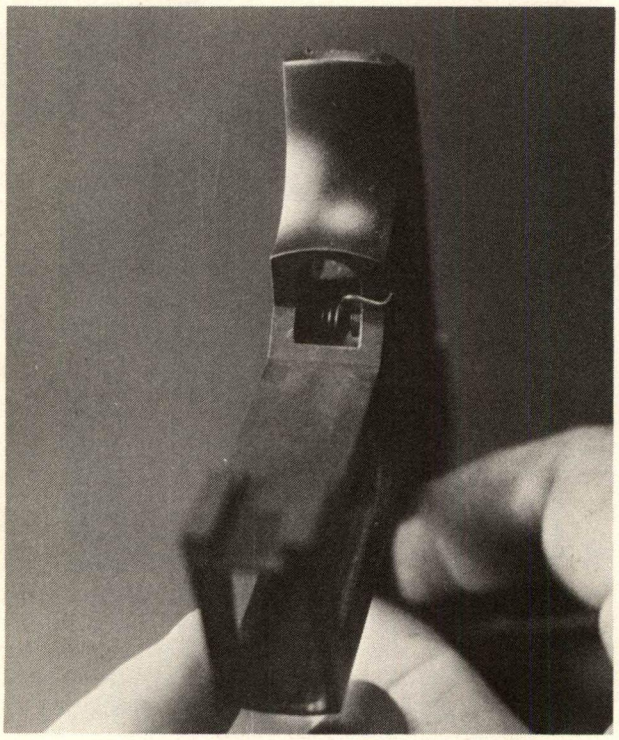
15. The takedown-latch lever can be pushed out to the left and removed from the frame. **Caution:** *Removal of the lever will release the takedown block and its spring and plunger, and the spring is under tension. Restrain the block while taking out the lever, then release it slowly.*

16. The decocking lever spring is easily detached from its holes in the lever and the frame, and can be lifted off toward the left.



17. The cross-shaft of the decocking-lever is also the sear pivot, and retains the sear and its spring. These parts will be released as the decocking-lever is pushed out toward the left and removed. The large cross-pin in the upper rear of the frame retains the hammer, and can be pushed out toward either side.





18. Before removal of the decocking-lever, sear, and sear spring, note the position of the sear spring, and its right arm which hooks under the frame edge on the right.

Reassembly Tips:

When replacing the sear and sear spring in the frame, a slave pin can be used to hold them in place while inserting the decocking-lever. The same procedure can be used when replacing the takedown block and its lever.

If the hammer strut, hammer spring, and magazine catch have been separated, it may be necessary to grip the upper part of the strut in a vise while compressing the spring with the magazine catch and inserting the keeper pin.

A slave pin can be used to hold the firing pin and its block in place for re-insertion of the cross-pin, but be sure to use a pin nearly the size of the hole, or the parts can be damaged.

Smith & Wesson 59

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Smith & Wesson Model 59 also apply to the following gun.

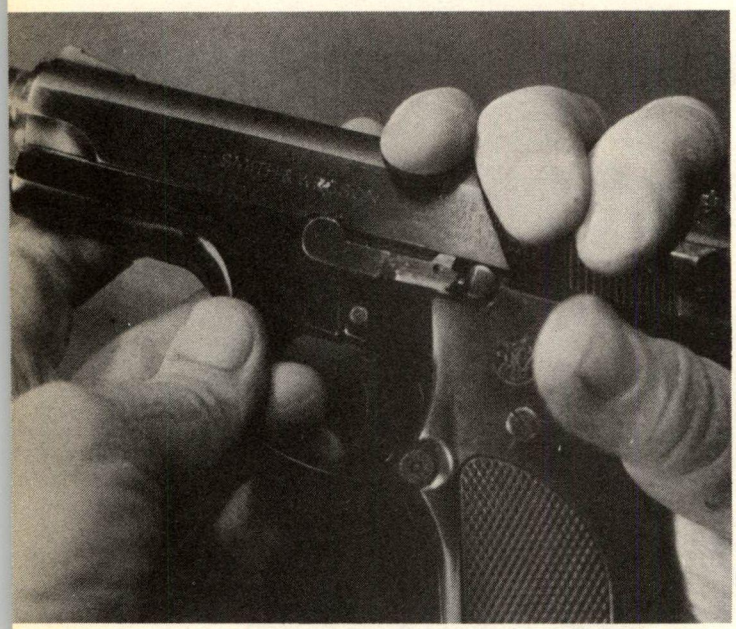
Smith & Wesson Model 39

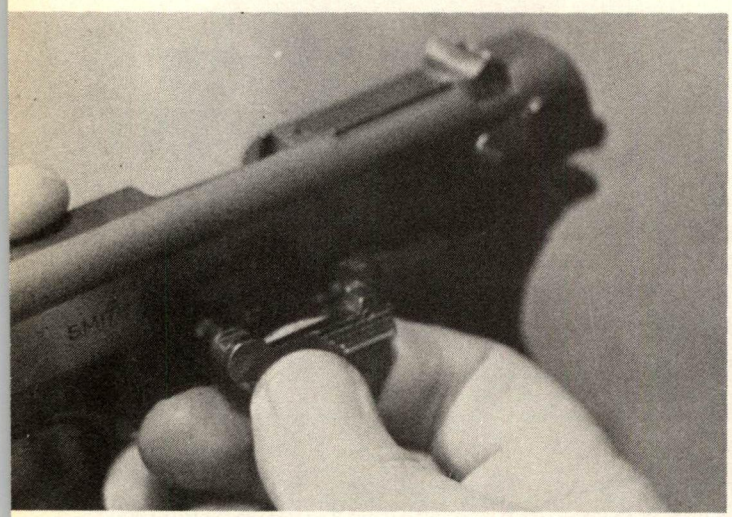
Data:	Smith & Wesson Model 59
Origin:	United States
Manufacturer:	Smith & Wesson, Springfield, Mass.
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	14 rounds
Overall length:	$7^{7}/_{16}$ inches
Height:	$5^{1}/_{2}$ inches
Barrel length:	$4^{1}/_{16}$ inches
Weight:	28 ounces

The Model 59 was essentially a Model 39 with an expanded magazine capacity. The wider magazine necessitated a few minor changes in the frame and its internal parts, but the slide assemblies of the two guns are virtually identical. With some slight variations, most of the instructions which follow can be applied to either the Model 59 or Model 39.

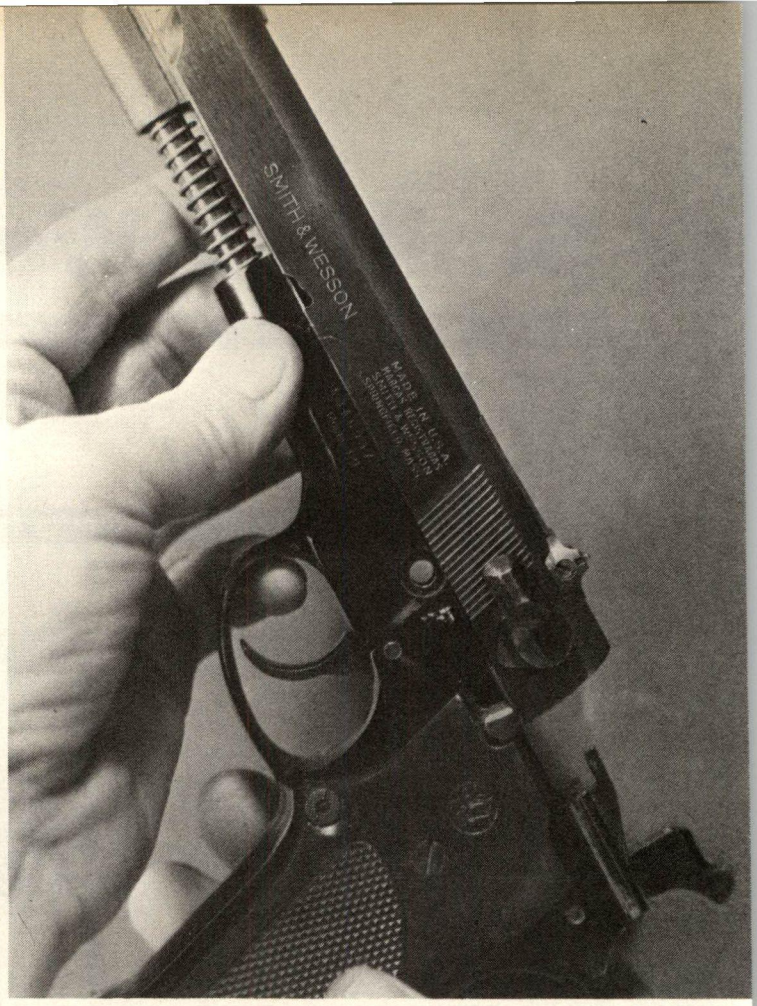
Field Strip:

1. With the hammer cocked and the magazine removed, grip the pistol as shown and move the slide back until the forward end of the slide-latch is aligned with the latch cut in the lower edge of the slide.

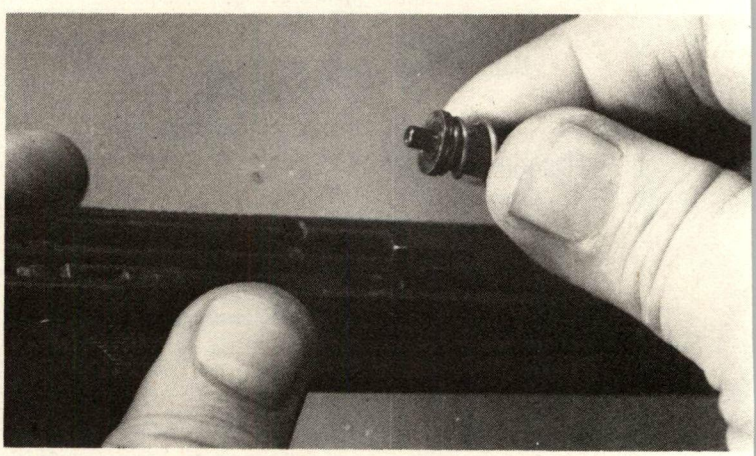




2. Starting the latch by pushing on its exposed end on the right side, withdraw it from the left side.

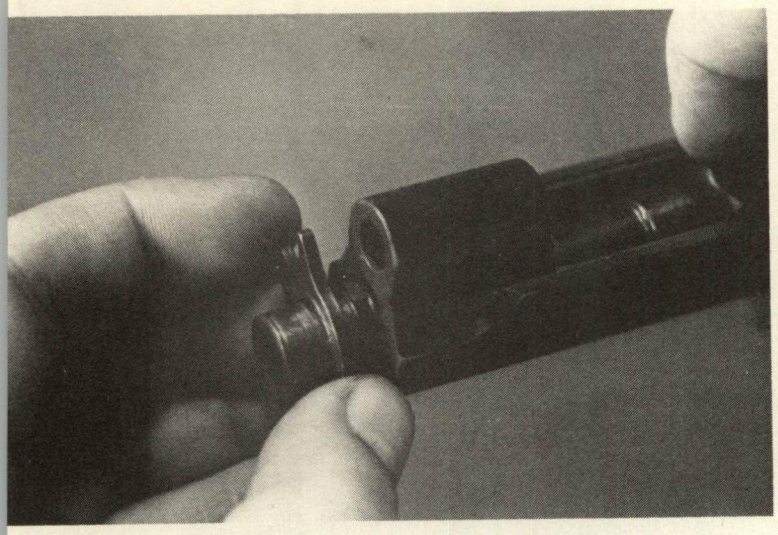


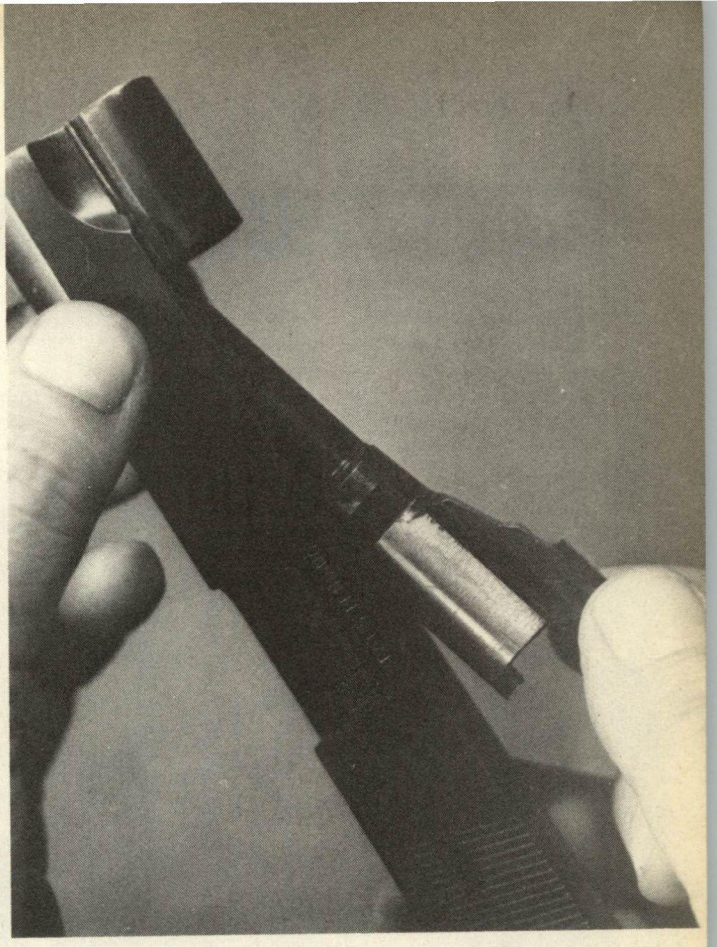
3. Move the slide assembly forward off the frame. The hammer will be released to fall as the slide passes over the automatic hammer-drop, so keep a thumb on it and ease it down.



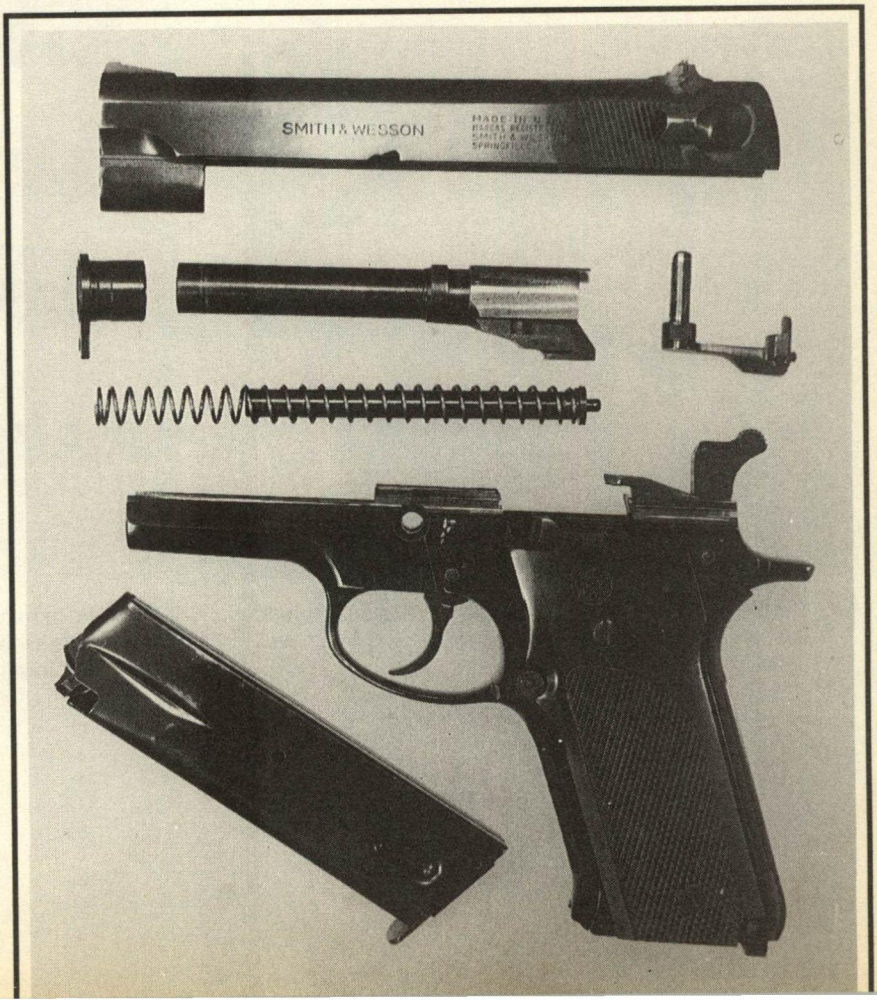
4. Move the recoil spring slightly forward, lift it up from its recess on the barrel, and remove the guide and spring from the underside of the slide. **Caution:** *Spring is under compression. Proceed with care.*

5. Turn the barrel bushing to the left until its lug aligns with the open track, and remove the bushing toward the front.





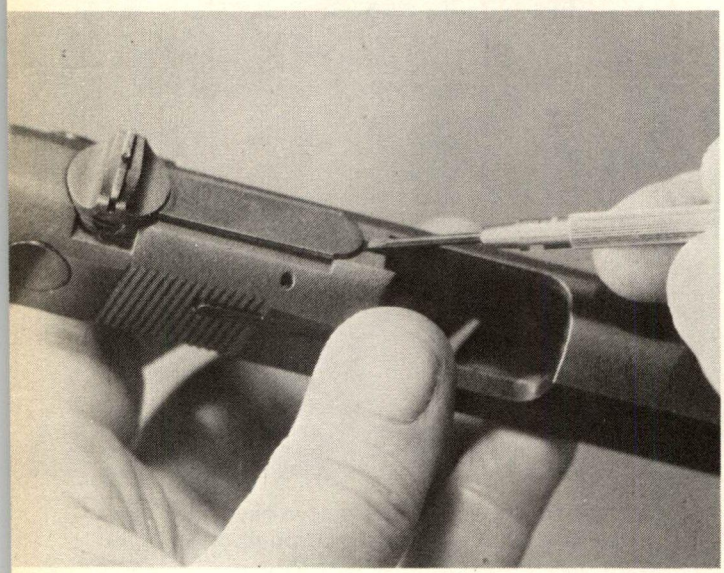
6. Lift the barrel at the rear and remove it from the bottom of the slide. **Gun is now field-stripped.**



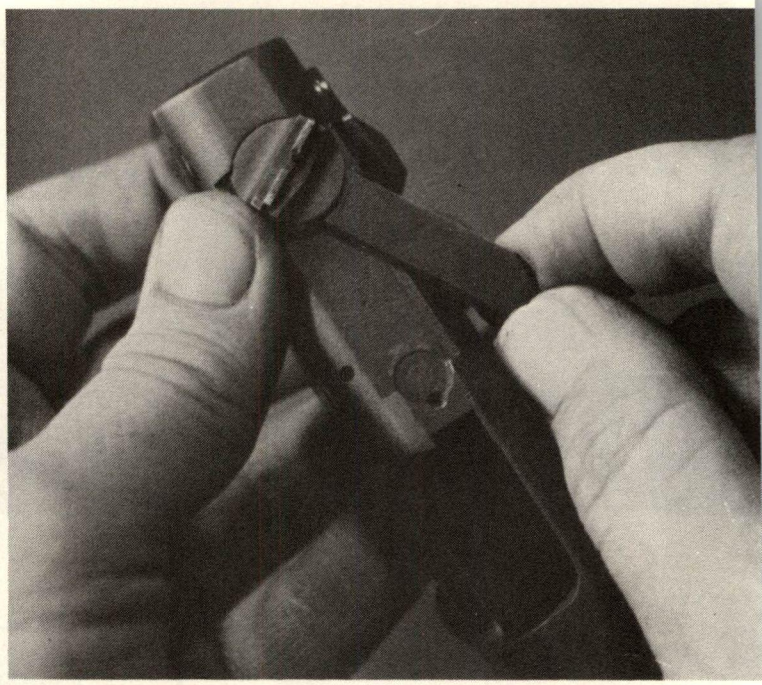
Smith & Wesson 59 field-stripped

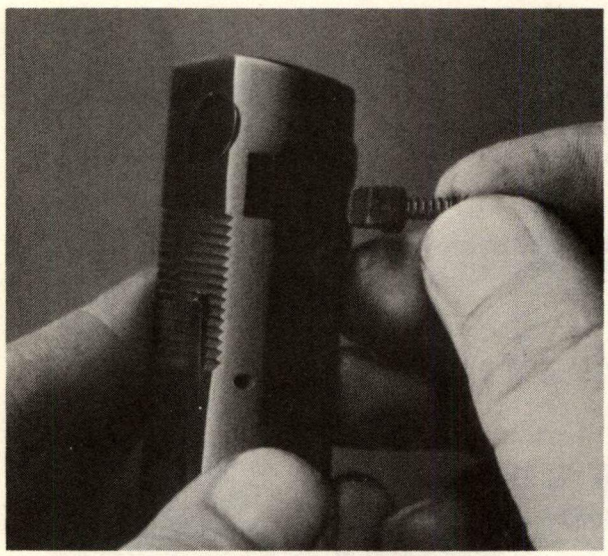
Detail Strip:

7. With a small screwdriver lift the front tab of the rear sight out of its recess in the top of the slide.

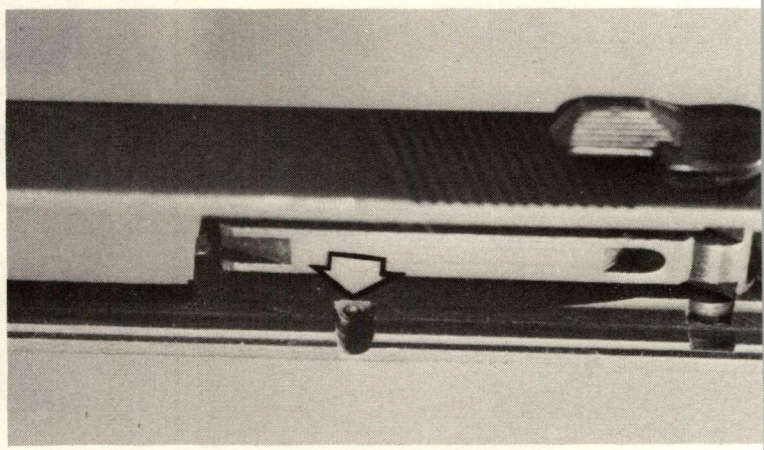


8. Move the front tab of the sight out toward the left side of the slide, rotating the rear base of the sight. When the tab of the sight is straight out to the side, the sight can be lifted off the top of the slide.



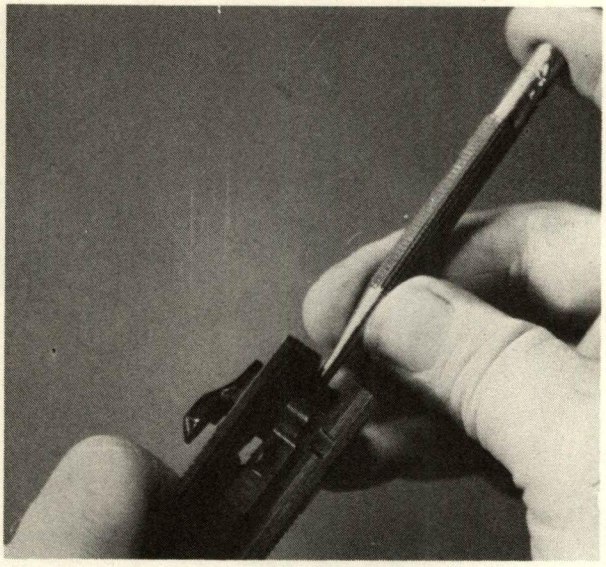


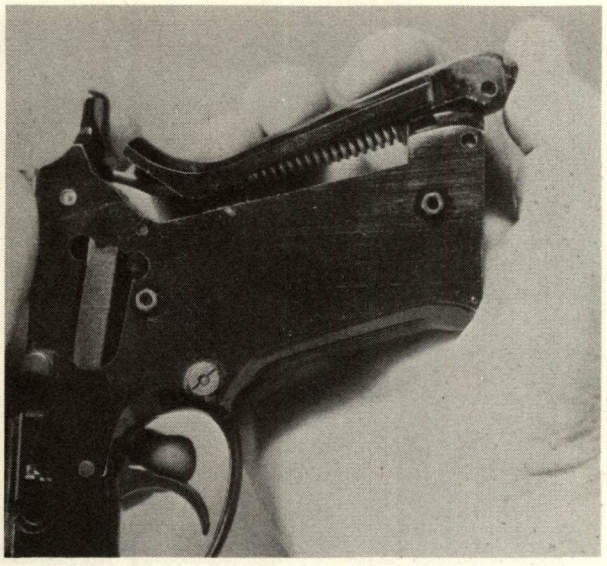
9. Lift the ejector depressor plunger and its spring (this is actually the magazine safety actuator) from its well in the top of the slide.



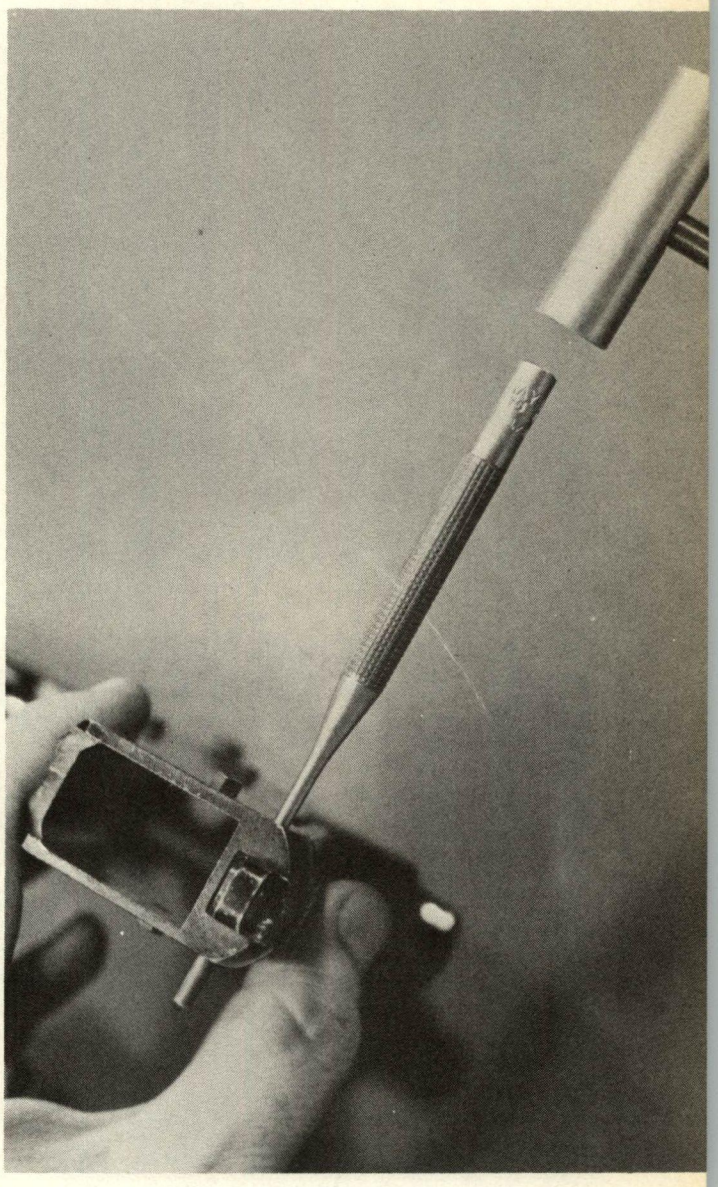
10. The extractor pin (arrow) is visible on the underside of the slide in a recess on the right side. Drifting out this pin will free the extractor and its spring.

11. With the safety in the off-safe position, use a drift to depress the firing pin beyond the safety drum, and nudge the safety out toward the left side of the slide. Removal of the safety will free the firing pin and its spring to be taken out toward the rear. The safety plunger and its spring can also be removed from inside the right wall of the slide.



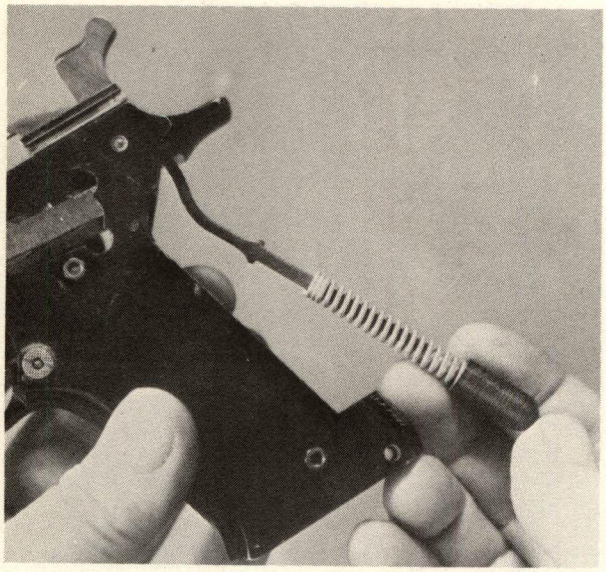


12. With a drift punch of the proper size, remove the pin at the lower rear of the grip frame, and take off the frame insert (backstrap).

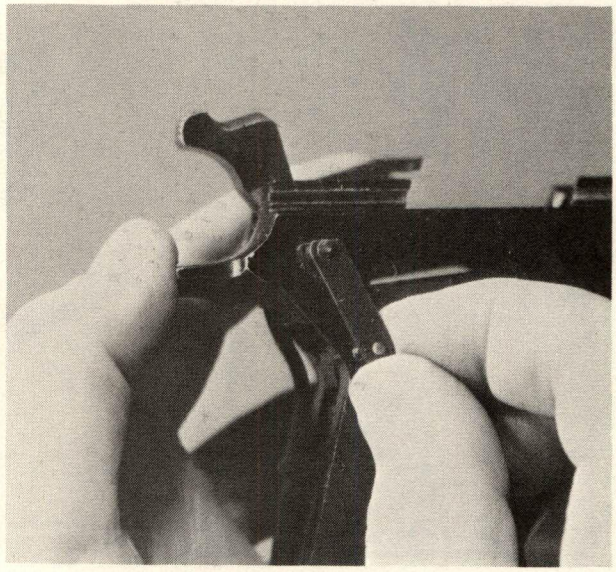


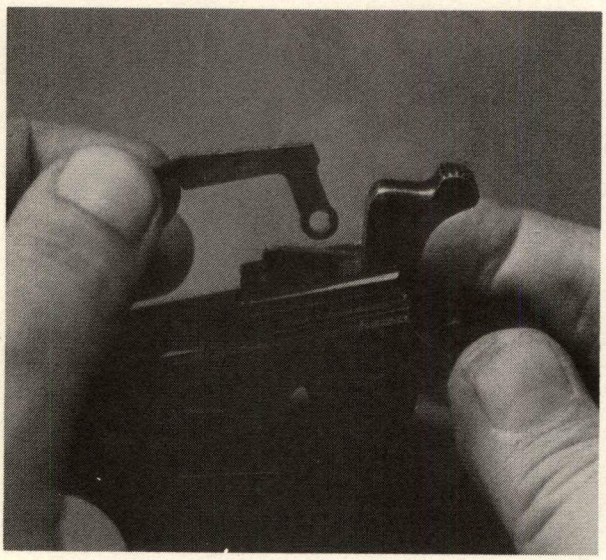
13. For removal, the backstrap is moved straight to the rear. When it has cleared the lower shoulders of the frame, the tension of the hammer spring will force it down and off.

14. Remove the hammer spring and its hollow plunger from the lower end of the hammer strut.

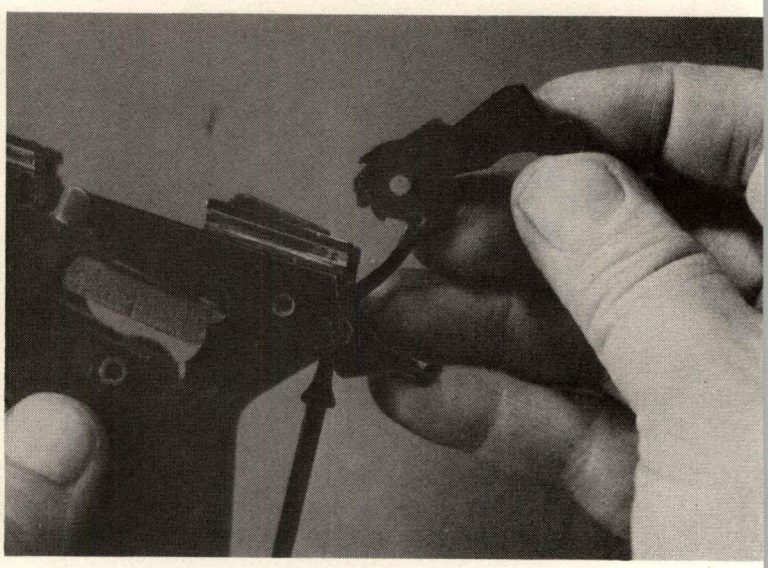


15. Remove the hammer pivot and its plate from the right side of the frame.





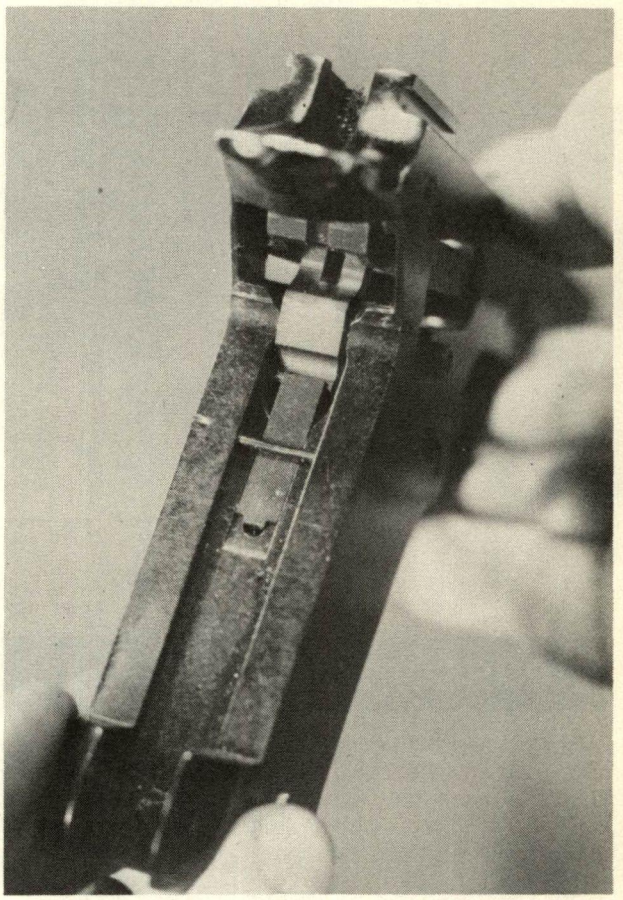
16. Lift the ejector from the top of the frame and remove the ejector spring from its well.



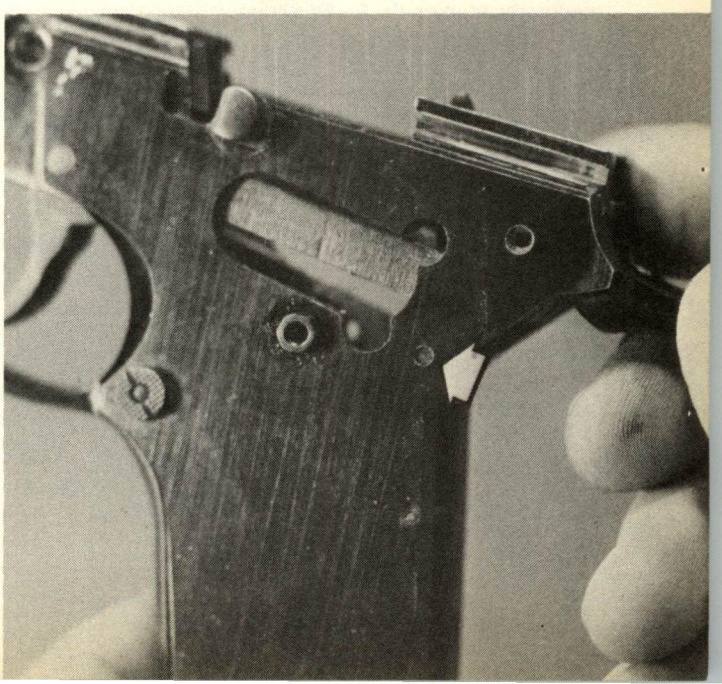
17. Remove the hammer and attached hammer strut from the top of the frame.

18. The sear release lever must be tipped forward and tilted to the left for removal.

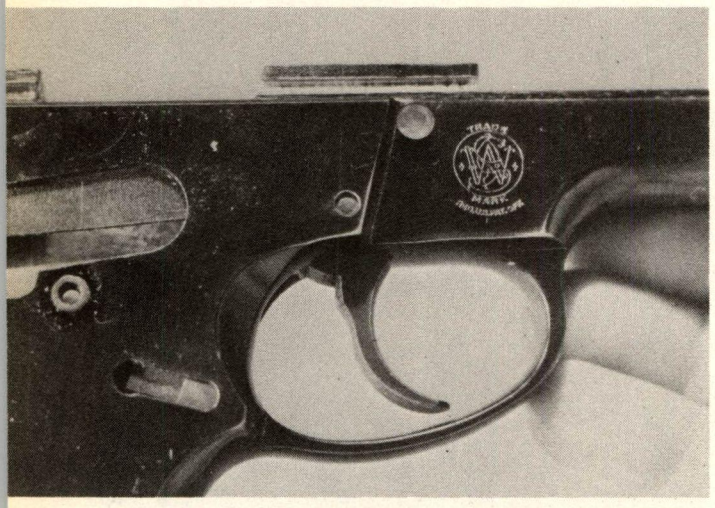
19. A small diameter cross-pin in the back of the grip frame retains the flat sear spring.



20. The sear is retained by a cross-pin (arrow) at the upper rear of the frame, and is removed downward. Taking out the sear will also free the disconnector for removal downward. The magazine release button on the left side has a small release beside it, level with the frame surface. When the small release tab is depressed, the magazine release button can be unscrewed from the magazine catch. The button, release plunger and spring are removed toward the left, the magazine catch piece to the right.



21. The trigger is retained by a cross-pin directly above it. When this is drifted out, the drawbar can be removed toward the rear of the frame, and the trigger spring and plunger taken out the top of the frame. The trigger is also moved up and out of the frame. The trigger play spring is riveted to the drawbar, and removal is not advisable unless necessary for replacement.

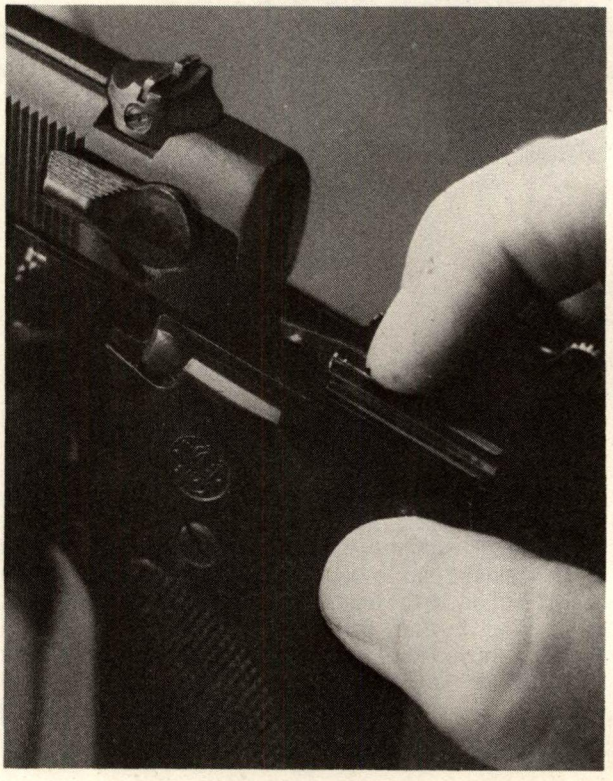


Reassembly Tips:

When replacing the trigger drawbar, do not reinsert the trigger pin until the drawbar is hooked over the top of the trigger. Be sure the trigger spring plunger tip is properly centered in its recess in the front of the drawbar before positioning trigger and inserting pin.

Pull the trigger to depress the sear while inserting the sear release lever in the frame and starting the hammer pivot through the loop on the lever. Otherwise, the sear will bear on the lever and make positioning difficult.

When inserting the disconnector, its lower arm must be turned slightly to the side to clear the block at the rear center of the drawbar.



1. When moving the slide back onto the frame, the ejector, then the sear release lever, must be depressed to clear the rear of the slide.

Smith & Wesson 459

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Smith & Wesson Model 459 also apply to the following guns.

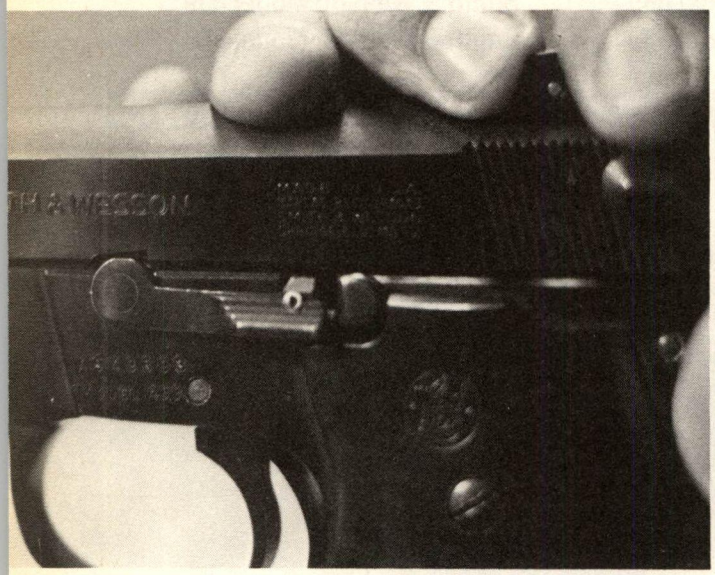
Smith & Wesson Model 439
Smith & Wesson Model 469
Smith & Wesson Model 639
Smith & Wesson Model 645
Smith & Wesson Model 659
Smith & Wesson Model 669

Data:	Smith & Wesson Model 459
Origin:	Smith & Wesson Springfield, Massachusetts
Cartridge:	9mm Luger
Magazine capacity:	14 rounds
Overall length:	$7^{7}/_{16}$ inches
Height:	$5^{11}/_{16}$ inches
Barrel length:	4 inches
Weight:	28 ounces

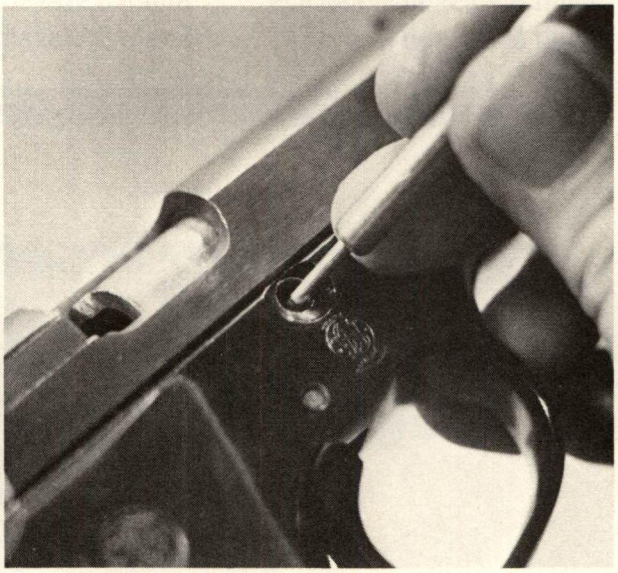
Except for the fully adjustable rear sight in its protective mount, the Model 459 and 439 pistols look very much like the Models 59 and 39 which they replaced. Inside, though, there were extensive mechanical changes which make the takedown and reassembly very different in some areas. One of the most notable additions is an automatic firing pin block safety system. This series of S&W pistols is now being referred to as the "second generation." In addition to the models mentioned above, it also includes the Model 639 and 659 (stainless steel), the compact versions, Models 469 and 669, and the 45 ACP, Model 645.

Field Strip:

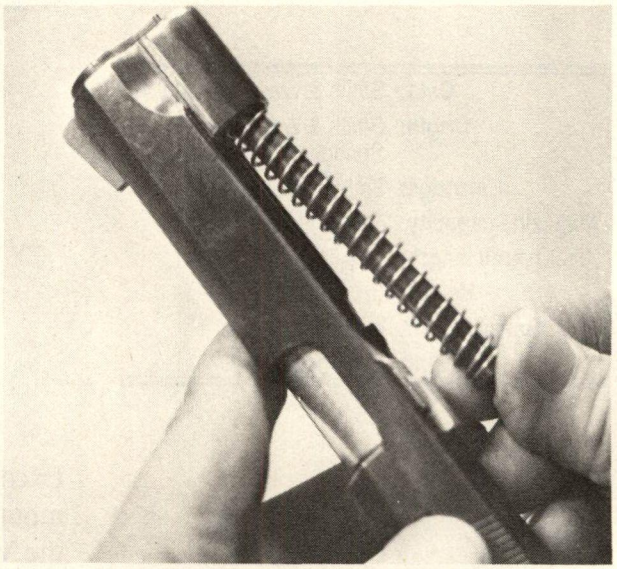
1. Remove the magazine and cock the hammer. Move the slide toward the rear until the slide-latch notch in its lower edge is aligned with the pivot of the slide latch, and hold it there.



2. Use a non-marring tool to push the right tip of the slide-latch cross-piece toward the left.

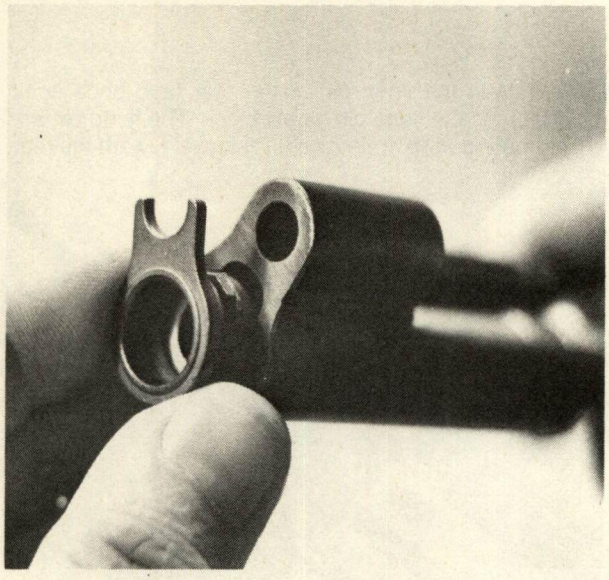


3. Remove the slide-latch toward the left. Move the slide back to its normal position, and use the safety to drop the hammer to the fired position. Return the safety to off-safe, and move the slide assembly forward off the frame.

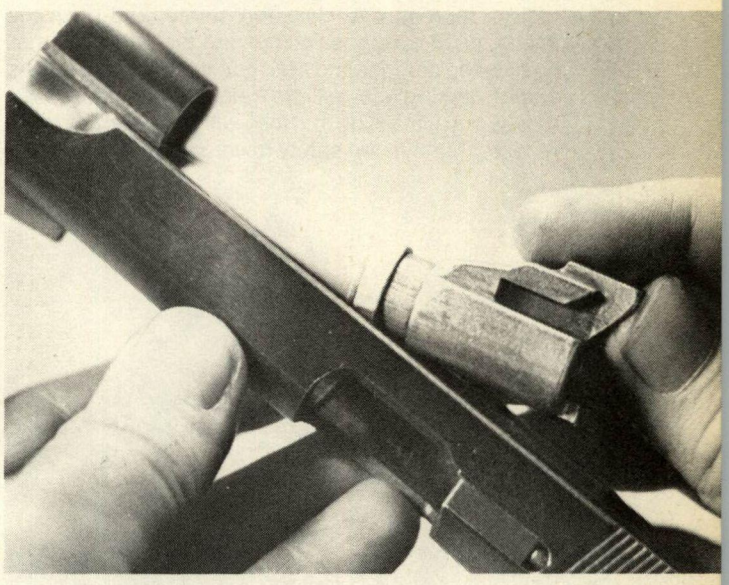


4. Grip the recoil spring and guide firmly to control the spring tension, and lift the spring assembly away from the barrel, removing it toward the rear. The slide-latch plunger and spring, mounted inside the rear of the recoil spring guide, are staked in and should not be disturbed.

5. Turn the muzzle bushing counterclockwise (front view) until it stops, then remove it toward the front.



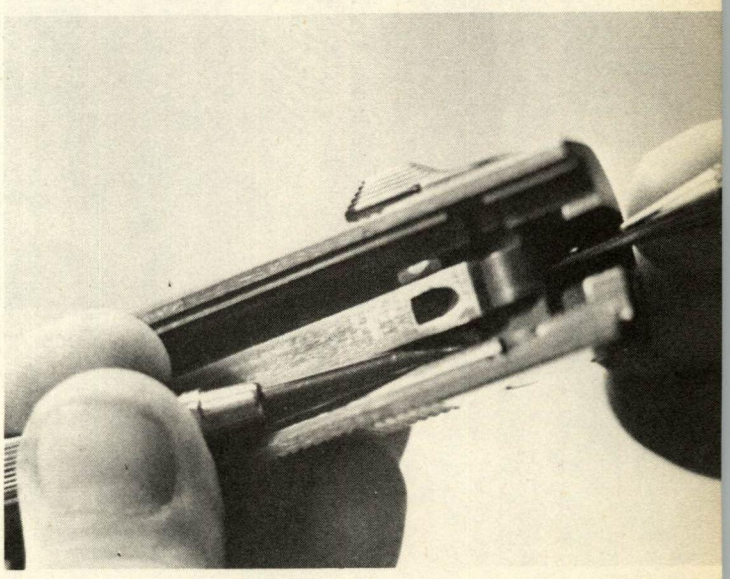
6. Move the barrel slightly forward, then tip it downward at the rear and remove it from the bottom of the slide. **Gun is now field-stripped.**



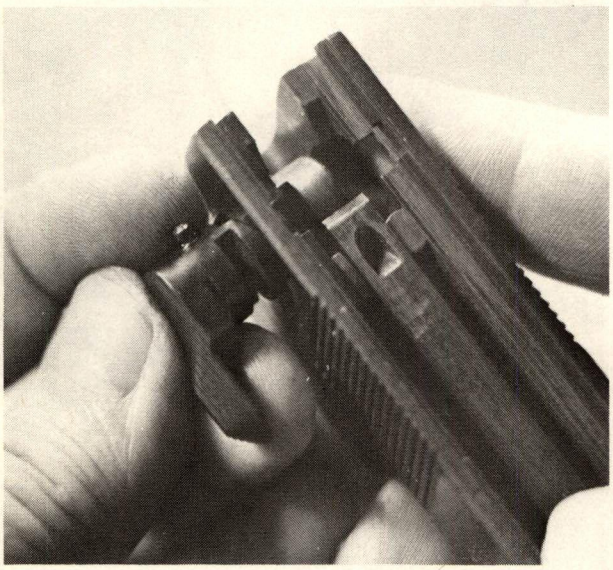
Smith & Wesson Model 459 field-stripped

Detail Strip:

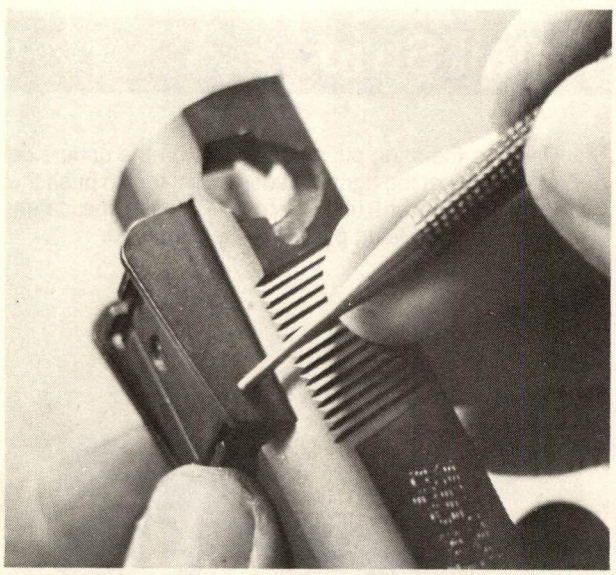
7. Depress the firing pin safety block, on the underside of the slide at the right, and use a slim tool to push the firing pin forward until it stops. Release the safety block, and the firing pin will be held forward.



8. In its forward position, the firing pin head will still protrude slightly into the safety cross-piece. Insert a tool to depress it to clear the safety, and push the safety, in off-safe position, toward the left. The small positioning plunger and spring at the lower rear of the safety cross-piece will be released as the safety moves out of the slide, but they will usually stay in their recess. Remove the safety toward the left.



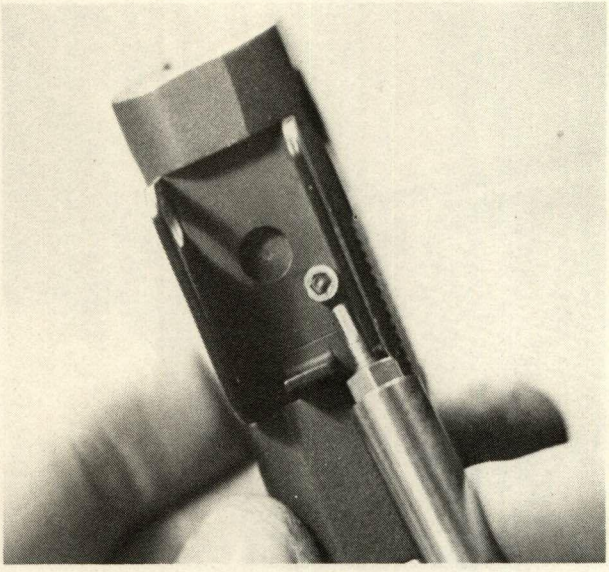
9. Restrain the firing pin at the rear, and once again depress the firing pin safety block. The firing pin and its spring will be released for removal toward the rear.



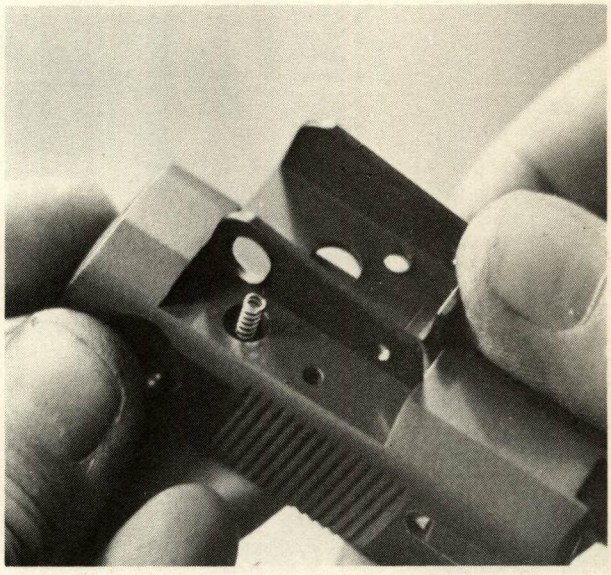
10. Alternately depress the rear sight hinge plungers on each side.

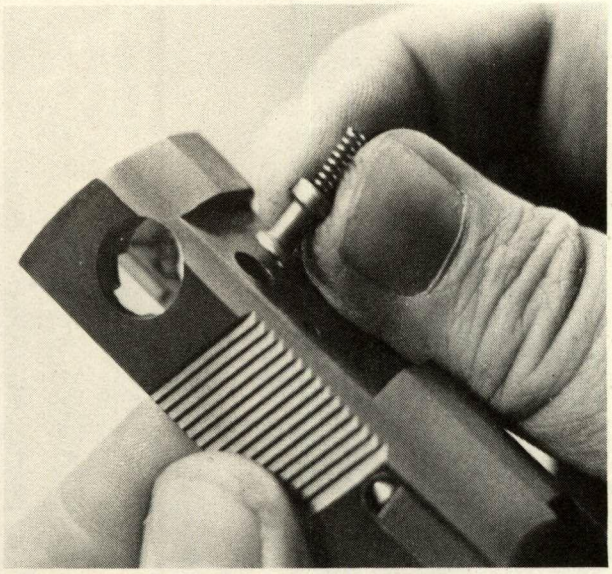
11. Restrain the plungers as they clear the sides of the sight mount, and remove the sight upward and toward the rear. Disassembly of the sight itself is not recommended.

12. With an Allen wrench or screwdriver bit, remove the screw on the left, inside the rear sight mount.

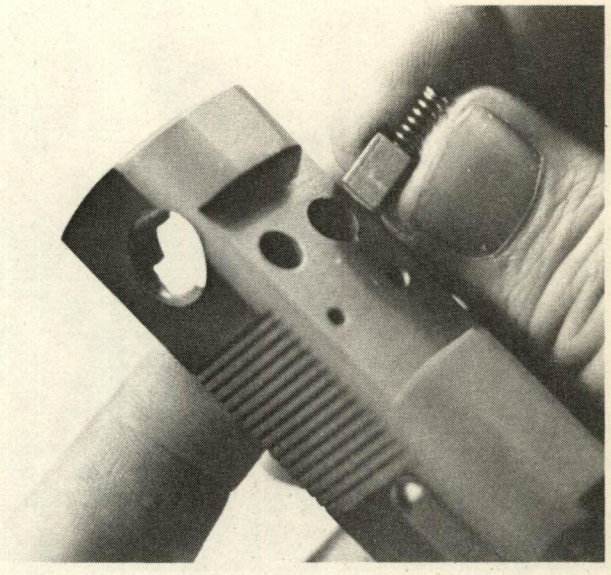


13. Slide the rear sight mount out of its dovetail in the slide, and restrain the two vertical coil springs that will be cleared.



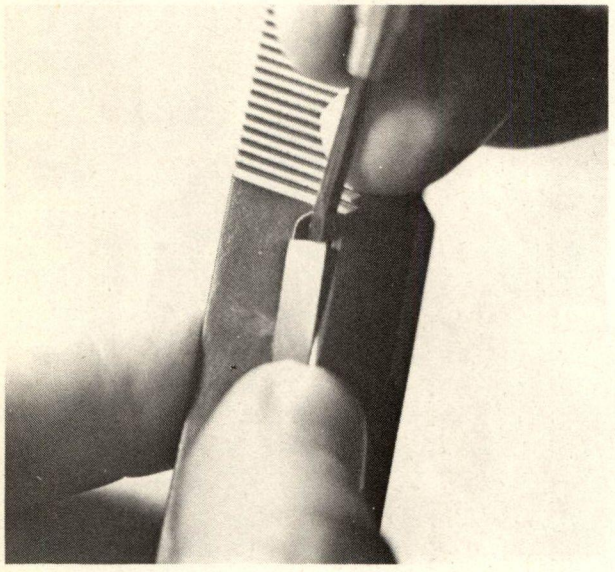


14. Remove the firing pin safety block and its spring from the top of the slide.

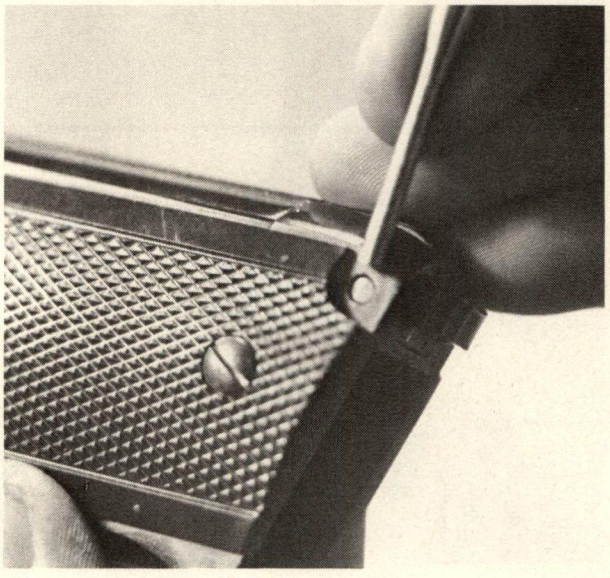


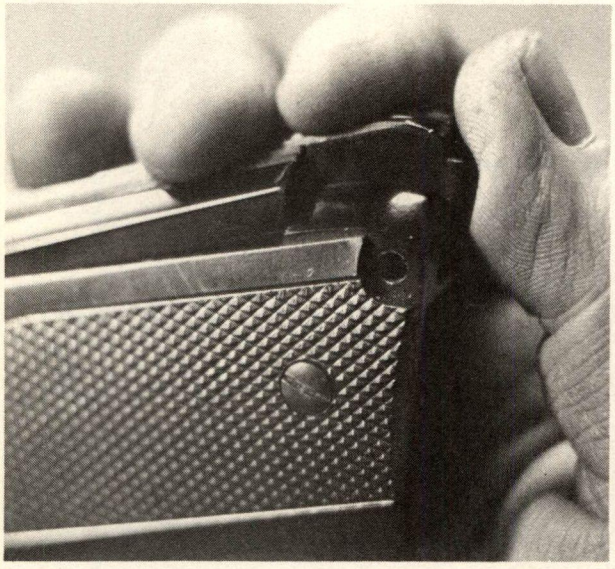
15. Remove the magazine safety plunger and spring from the top of the slide.

16. Insert a small sharp screwdriver between the extractor and its plunger, and turn the blade slightly, forcing the plunger toward the rear, and lever the extractor out of its recess. Keep the plunger under control, and ease the spring and plunger out toward the front.



17. With the hammer in the fired position, drift out the cross-pin at the lower rear of the grip frame.

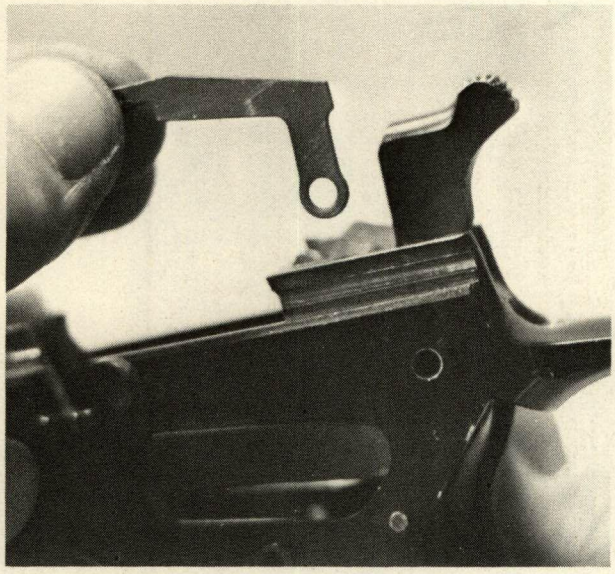




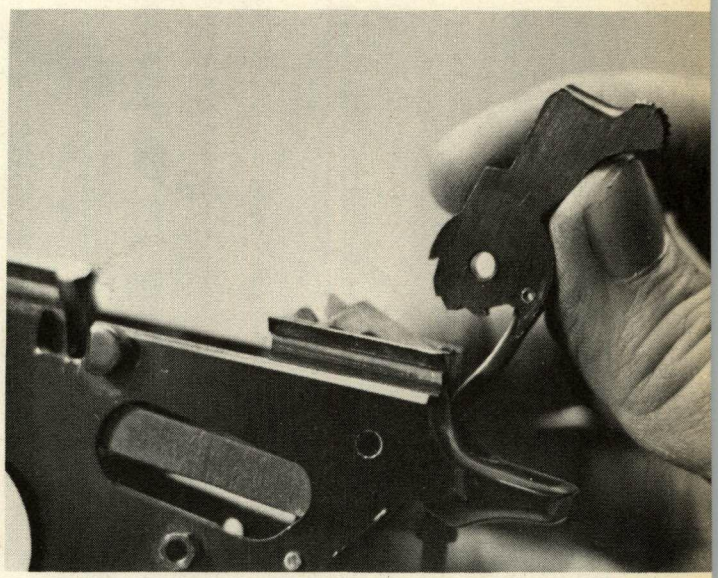
18. Push the lower end of the backstrap insert back until it clears its frame shelf, and it will be forced downward by the pressure of the hammer spring. Remove the insert downward and toward the rear.

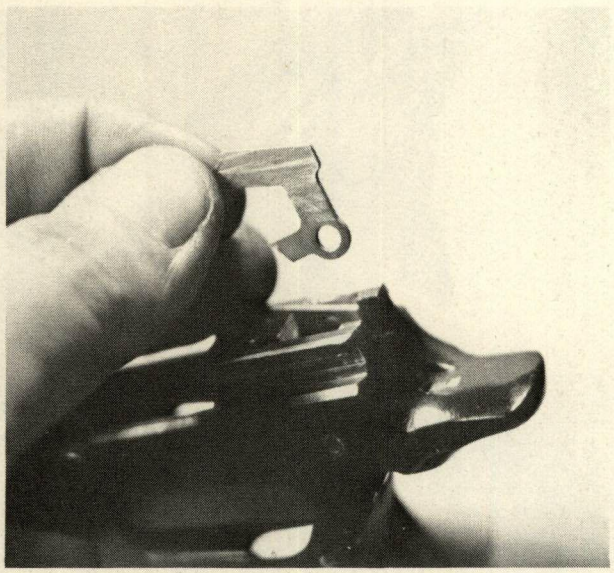
19. Remove the hammer spring plunger and the spring from the hammer strut.

20. Remove the grips. Push the hammer pivot about one-third of its length toward the right. Remove the ejector upward, and take out the ejector spring from its well in the frame.

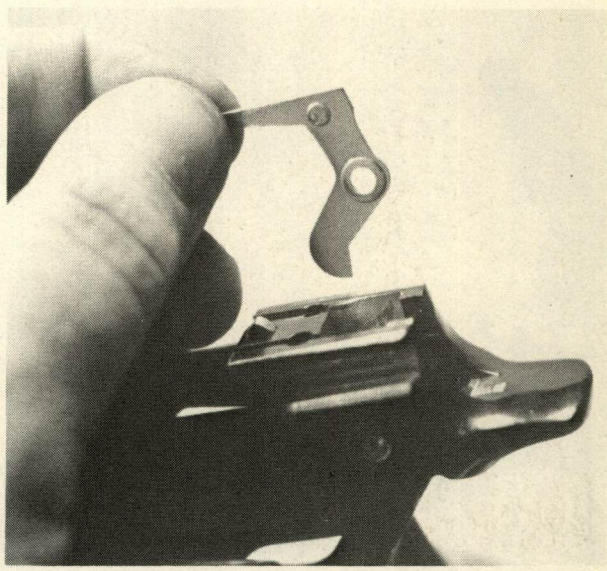


21. Remove the hammer pivot toward the right, and take out the hammer upward. A roll cross-pin joins the strut to the hammer, and this can be removed to separate them, if necessary.



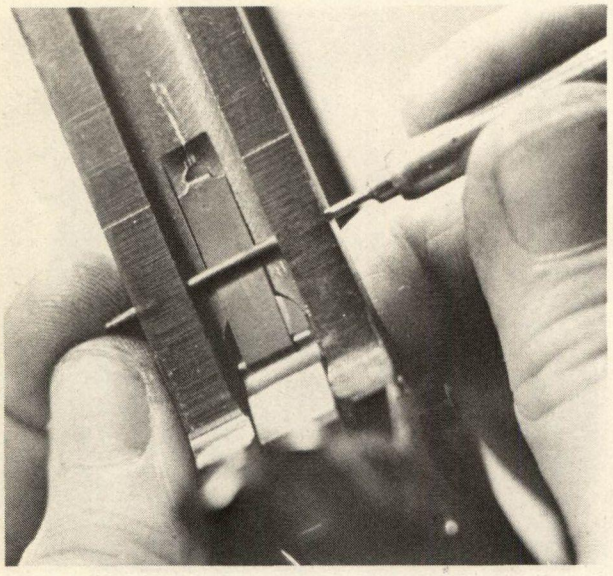


22. Move the sear trip lever slightly toward the left, then remove it upward.

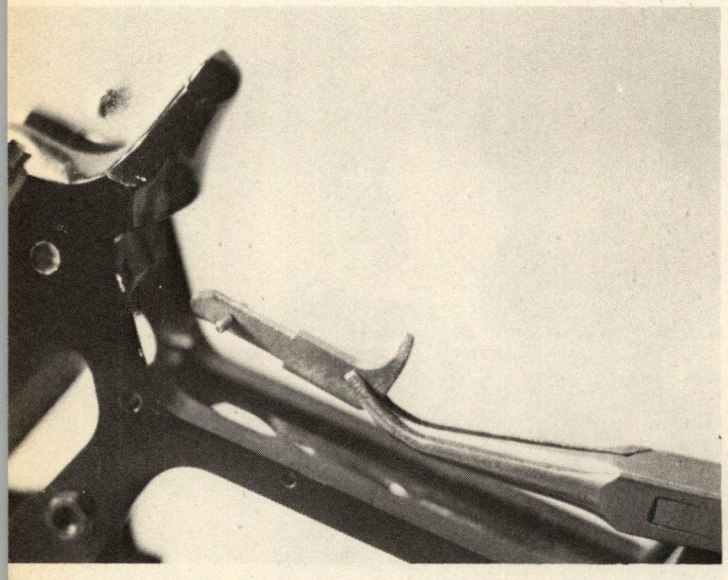


23. Move the firing pin block lever slightly to the left, then rearward, and take it out upward. Remove the spring that powers these two parts from its well in the frame.

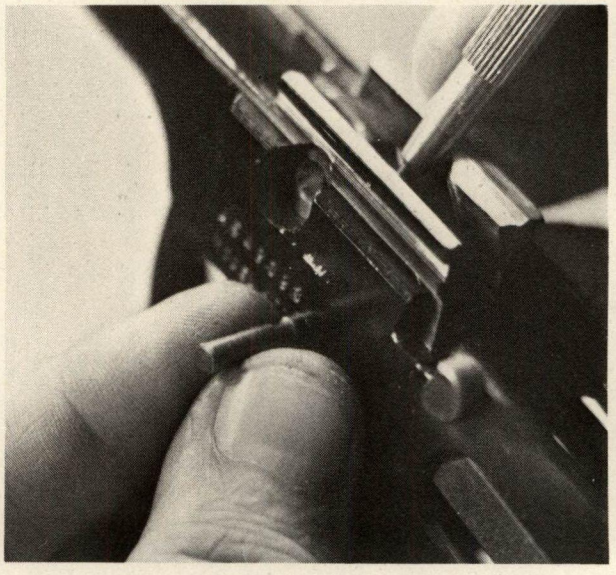
24. Drift out the small cross-pin that retains the sear spring, inside the backstrap. This must be drifted out toward the right. Remove the spring toward the rear.



25. Push out the sear cross-pin toward either side, and remove the sear downward.



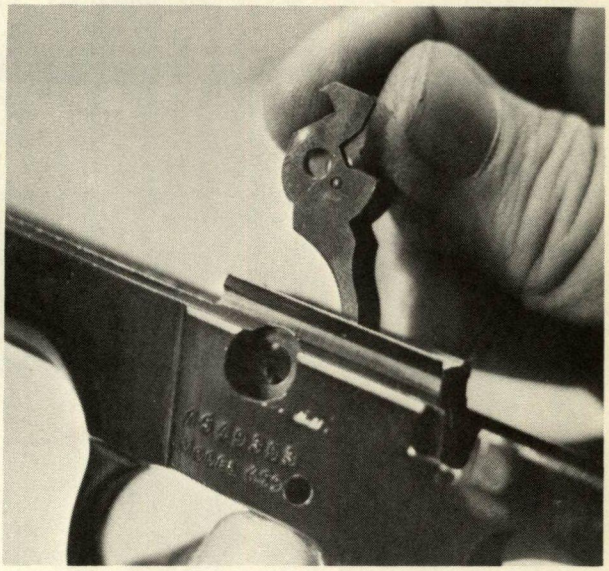
26. Turn the disconnector very slightly toward the right, to clear the trigger bar, and remove the disconnector downward.

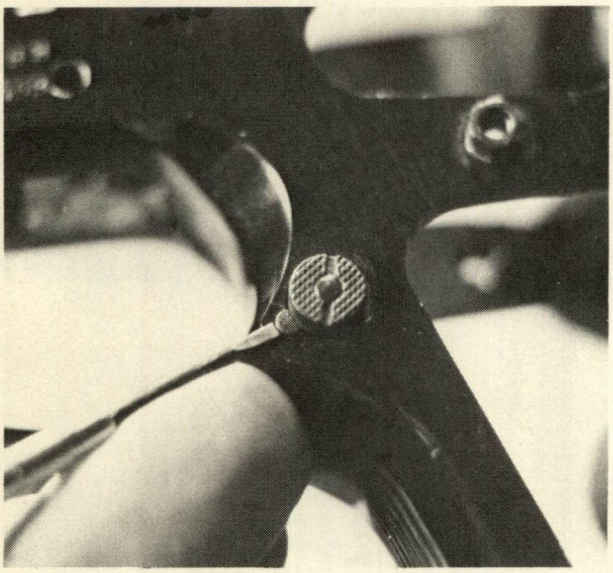


27. Insert a small screwdriver to restrain the trigger spring plunger, and push the trigger pivot pin out toward either side.

28. Allow the trigger to move downward, slowly release the tension of the trigger spring and plunger, and remove the trigger bar toward the rear. The trigger play spring, riveted in place on top of the trigger bar, should not be disturbed.

29. Remove the trigger plunger and spring toward the rear. Move the trigger to the rear of the guard, tilt it forward, and take it out upward. The trigger pivot retaining plunger and spring are mounted inside the trigger, and are retained by a small cross-pin. In normal takedown, these parts are best left in place.





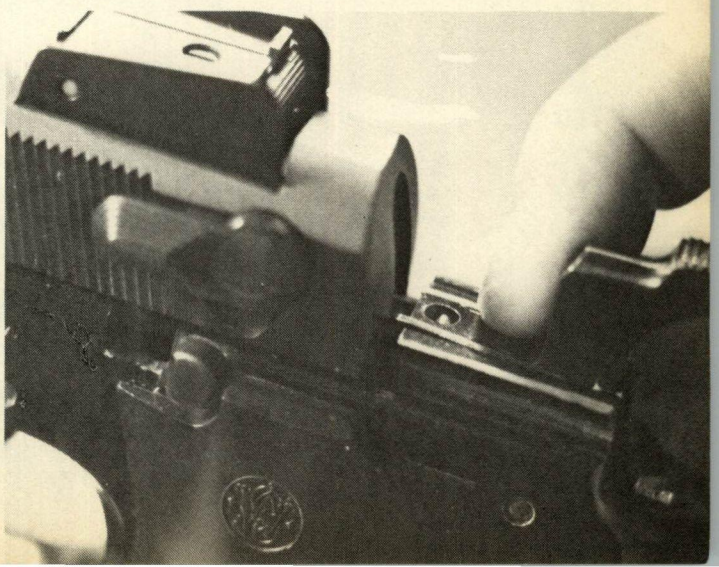
30. Depress the magazine release retainer, and unscrew the release button from the magazine catch cross-piece (counterclockwise, left side view). There is a tool slot in the button, but in most cases the button can be unscrewed with the fingers. The button, retainer, and spring are taken off toward the left, and the catch piece toward the right.

Reassembly Tips:

When replacing the sear cross-pin, note that the reduced tip must go on the right, to mate with the hole in the hammer pivot plate.

When moving the rear sight mount into place, alternately depress the two springs to avoid deformation.

1. When replacing the slide assembly on the frame, the ejector and the two small levers on the right must be depressed to go under the slide.

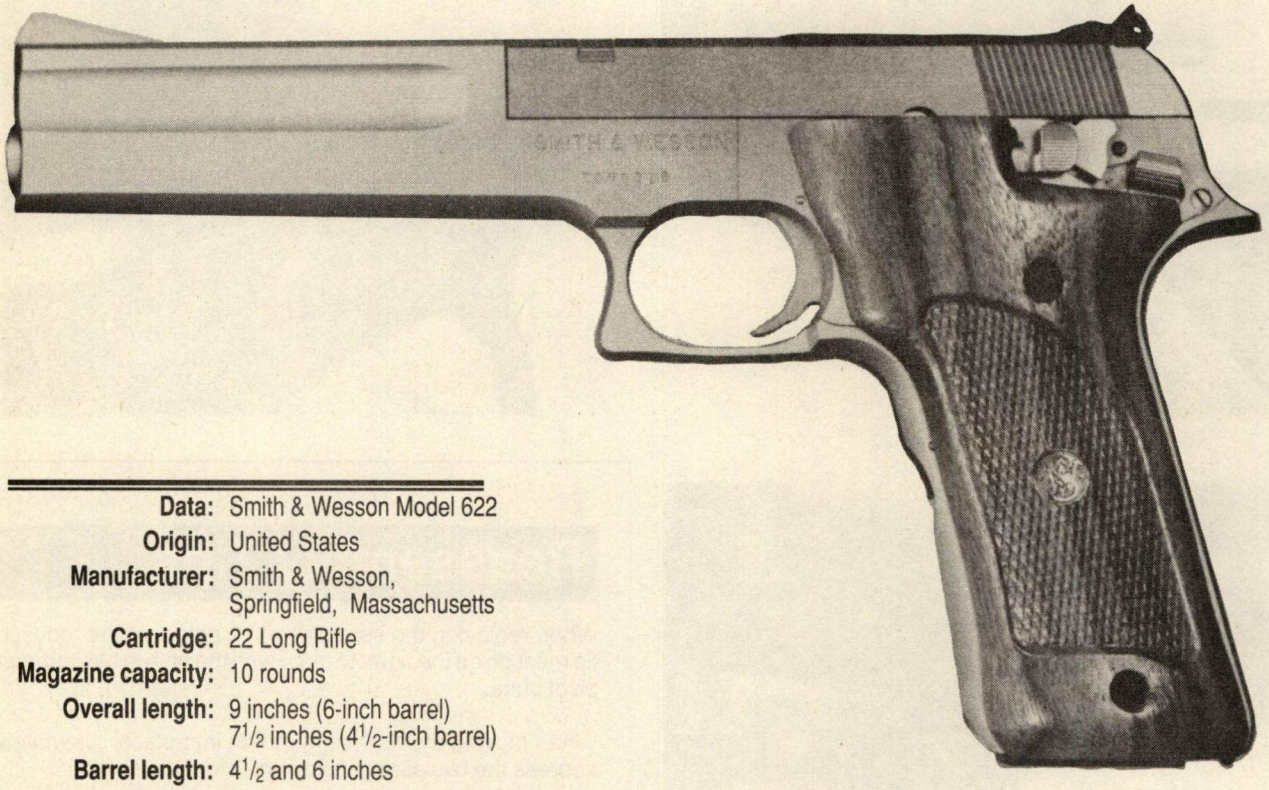


Smith & Wesson 622

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Smith & Wesson Model 622 also apply to the following guns.

Smith & Wesson Model 422 **Smith & Wesson Model 2206**

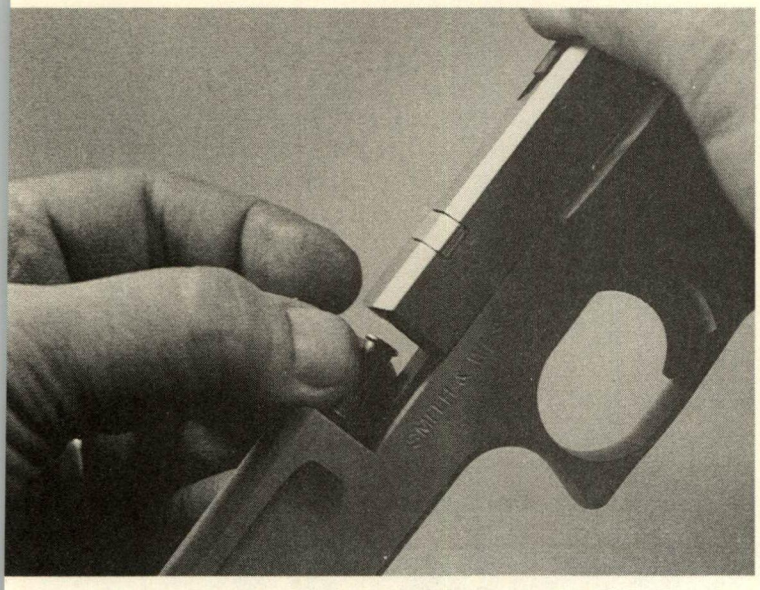


Data:	Smith & Wesson Model 622
Origin:	United States
Manufacturer:	Smith & Wesson, Springfield, Massachusetts
Cartridge:	22 Long Rifle
Magazine capacity:	10 rounds
Overall length:	9 inches (6-inch barrel) 7 1/2 inches (4 1/2-inch barrel)
Barrel length:	4 1/2 and 6 inches
Weight:	23 ounces (6-inch barrel) 22 ounces (4 1/2-inch barrel)

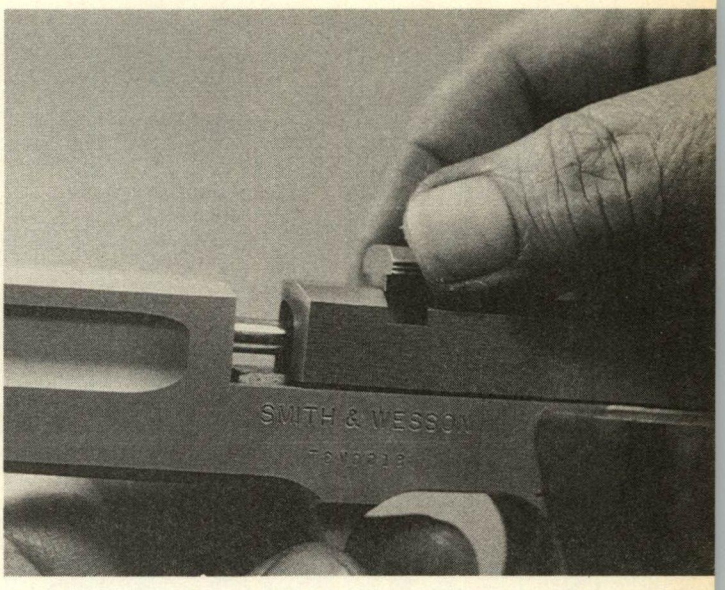
There are two basic versions of this pistol, and each is available in either blued steel (Model 422) or stainless steel (Model 622). The Field version has fixed sights and Minlon grips, and the Target version has fully adjustable sights and checkered walnut grips. Both are offered in two barrel lengths. Mechanically, both Model 422 and Model 622 versions are the sane, and these instructions will apply.

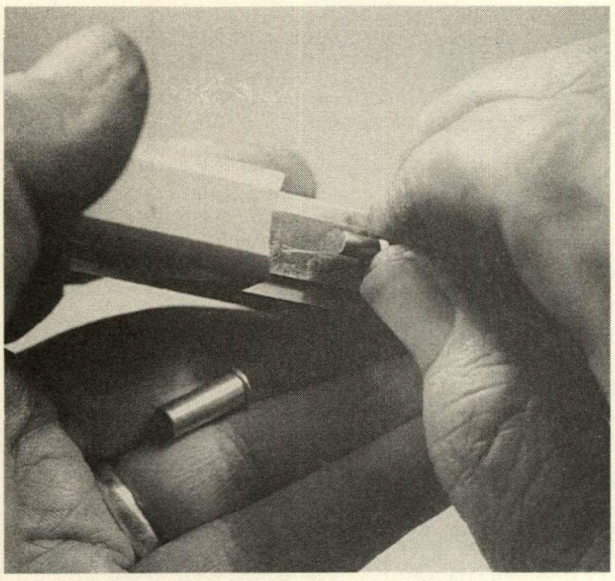
Field Strip:

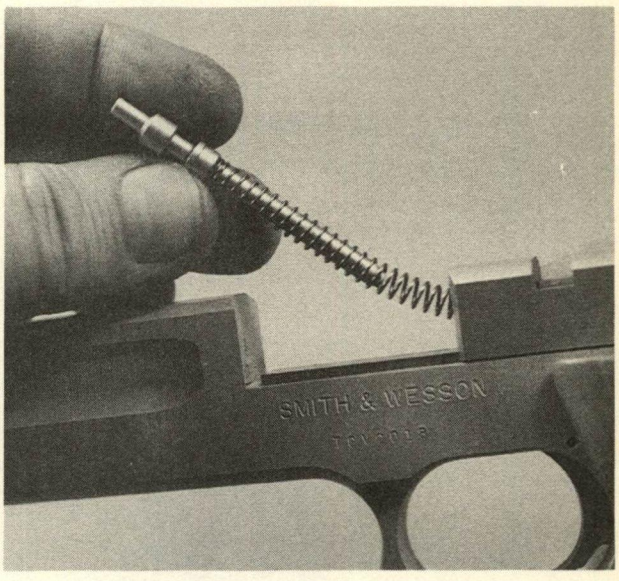
1. With the magazine removed and the internal hammer cocked, pull the slide back about 1 inch, and insert an empty 22 cartridge case, as shown, to contact the front tip of the recoil spring guide.



2. Ease the slide forward until it is stopped by the cartridge case, and lift the recoil guide plug upward out of the slide.



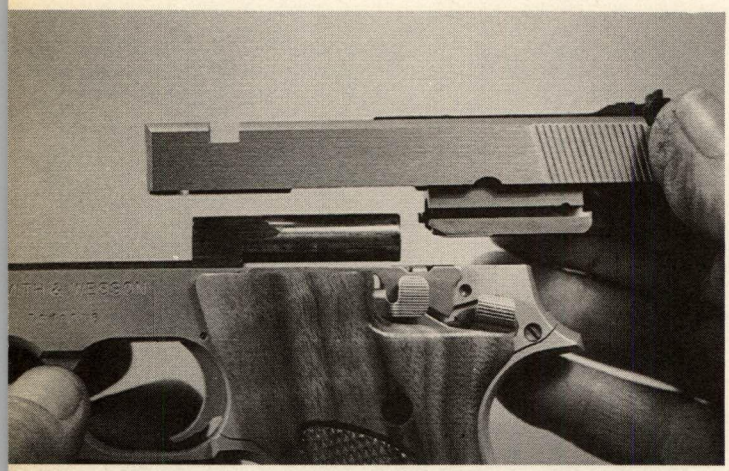




3. Move the slide toward the rear, and firmly grip the recoil spring guide. Move the guide toward the rear to release the cartridge case. **CAUTION:** *Control the guide and spring.*

4. Carefully ease the tension, tip the front of the guide upward, and remove the recoil spring and guide upward and toward the front.

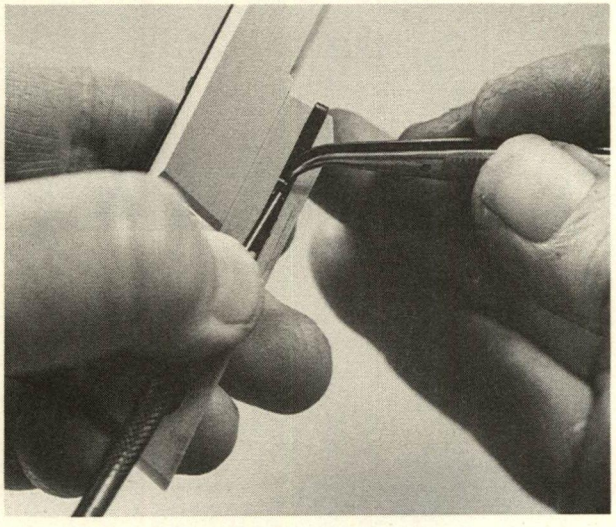
5. Remove the slide upward. **Gun is now field-stripped.**



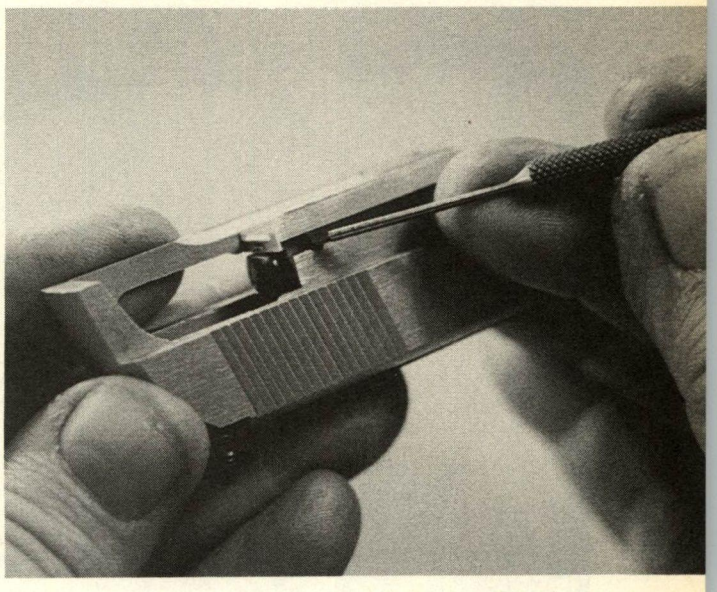
Smith & Wesson Model 622 field-stripped

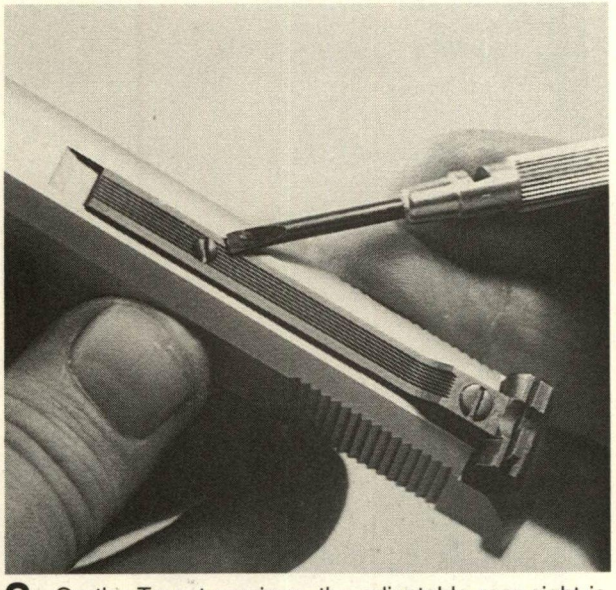
Detail Strip:

6. The extractor and its two small coil springs are retained on the right side of the slide by a vertical pin which is rebated at the extractor contact point. Depress the extractor behind the pin, and use sharp tweezers to move the pin downward until its lower end can be grasped on the underside of the slide for withdrawal. Except for repair, this system should be left in place.



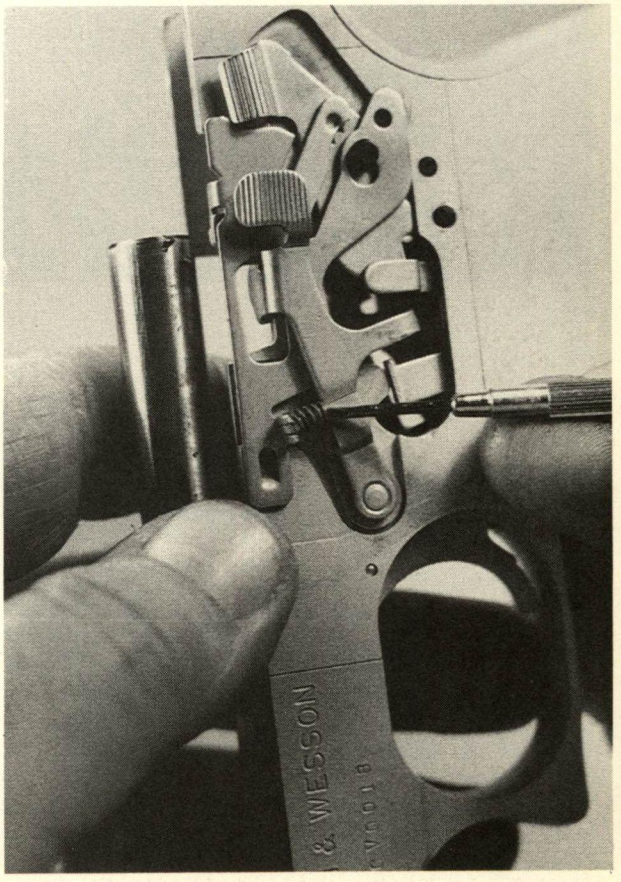
7. The firing pin and its return spring are retained by a roll cross-pin. After the cross-pin is drifted out, the firing pin and its spring are taken out rearward.



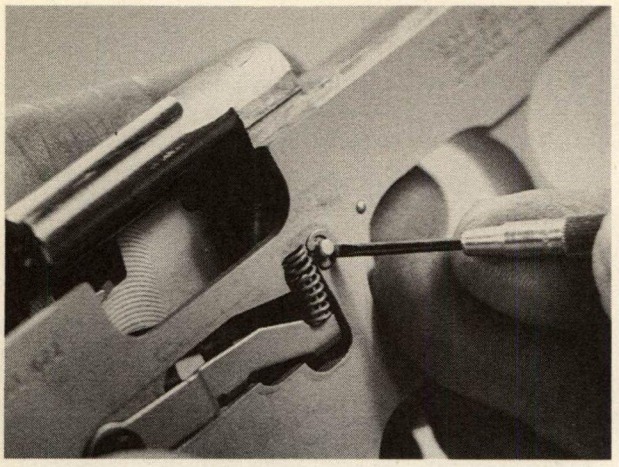


8. On the Target versions, the adjustable rear sight is retained by a single screw in its forward extension. After the screw is removed, the sight is taken off rearward. On the fixed-sight Field versions the sight is drifted out of its dovetail toward the right.

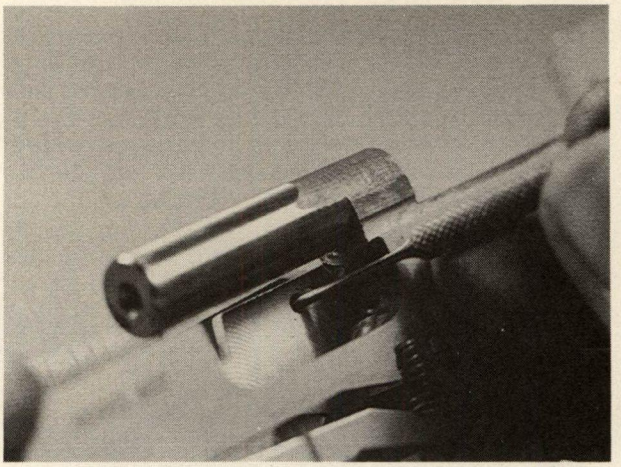
9. With a screwdriver of proper dimensions, remove the grip panels. Use a small tool to detach the slide-latch spring, and remove it.



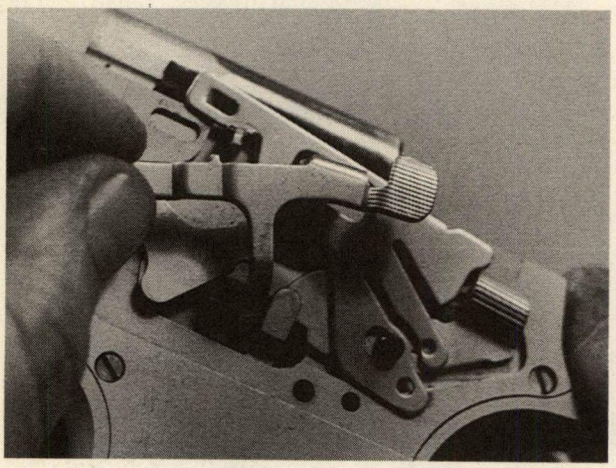
10. On the right side of the frame, carefully remove the C-clip from the tip of the slide-latch cross-shaft.



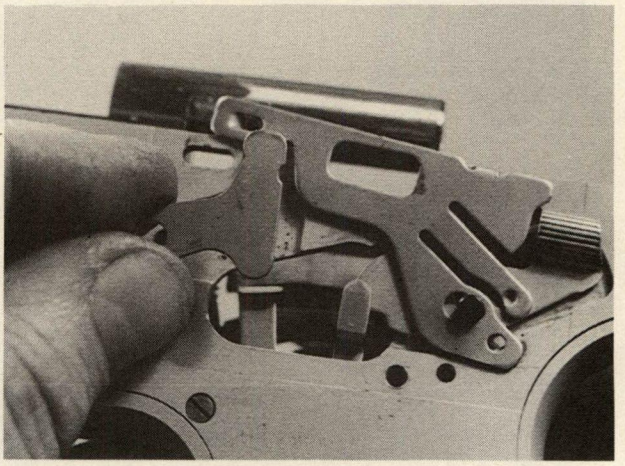
11. From the right side, insert a tool to push the spring plate detent out of its recess in the frame, moving it slightly upward.



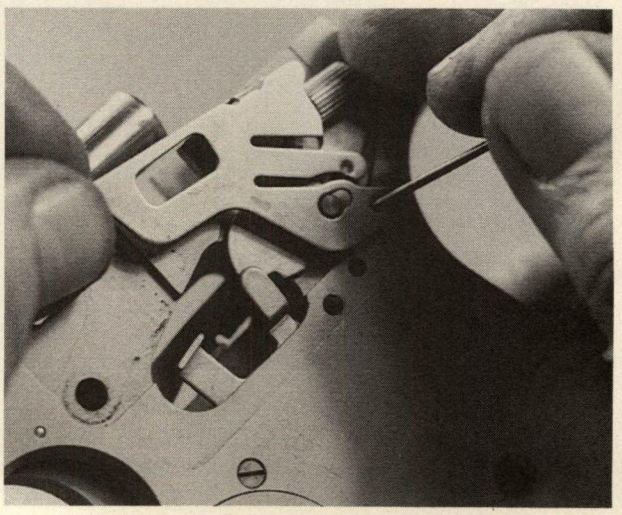
12. Move the spring plate up to the position shown, and remove the combination slide-latch and ejector toward the left.



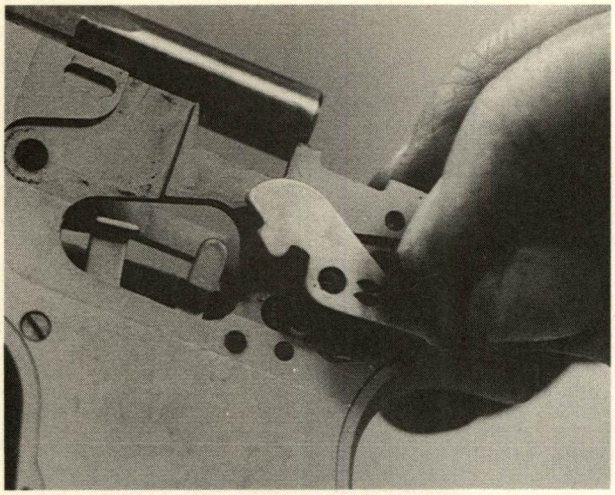
13. Remove the disconnector toward the left.



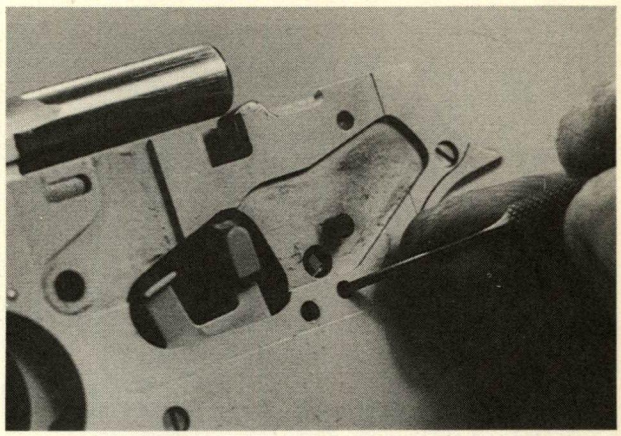
14. Insert a tool in the hole in the lower rear edge of the spring plate, and move it rearward until the larger opening aligns with the end of the hammer pivot. Remove the spring plate toward the left.



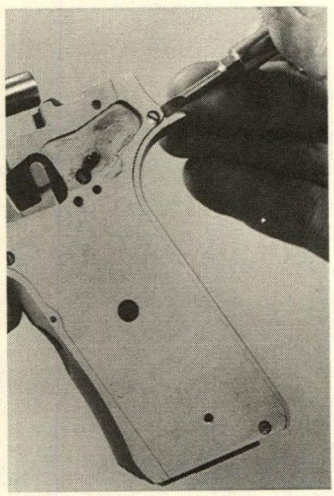
15. Remove the safety-lever toward the left.



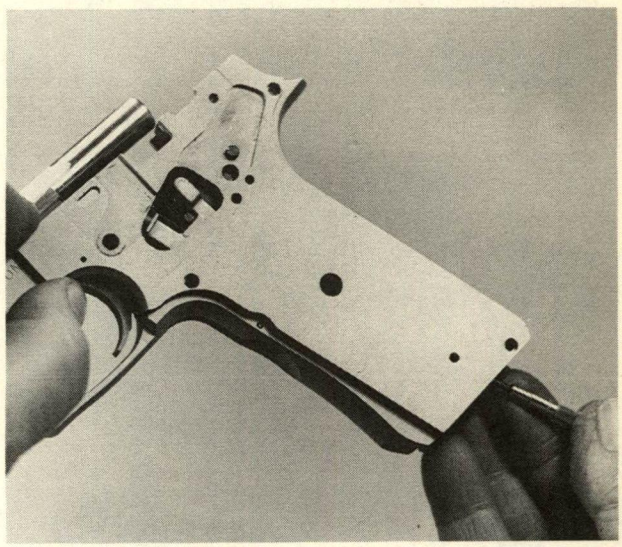
16. Insert the magazine to depress the magazine safety. Restrain the hammer, pull the trigger, and ease the hammer down to fired position. Push the sear pin about 1/8-inch toward the right, just enough to clear the sideplate.

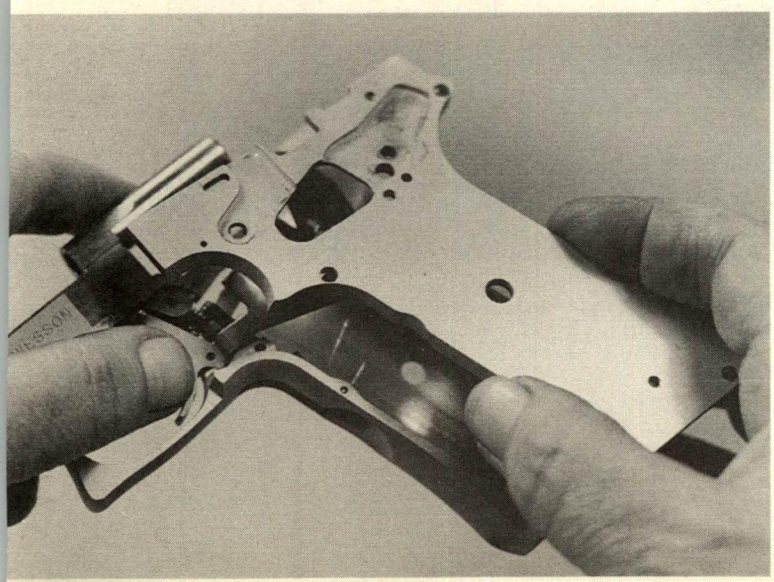


17. Remove the three sideplate screws, at upper rear, lower rear, and behind the trigger.



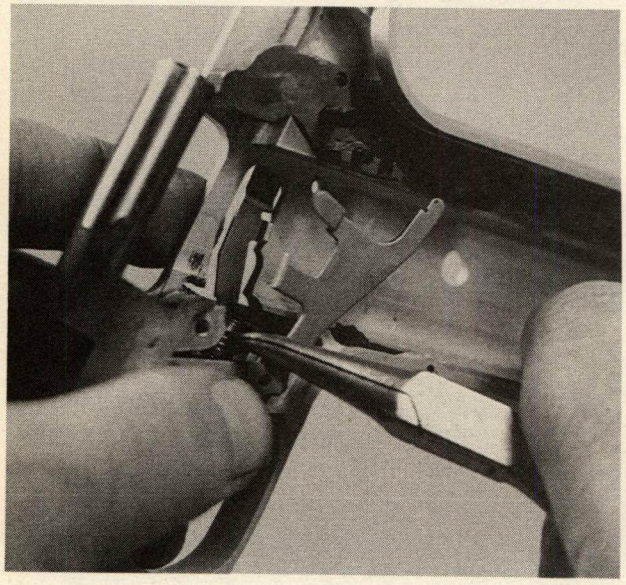
18. Working equally around the sideplate, keeping it as even with the frame as possible, gently pry the sideplate outward.



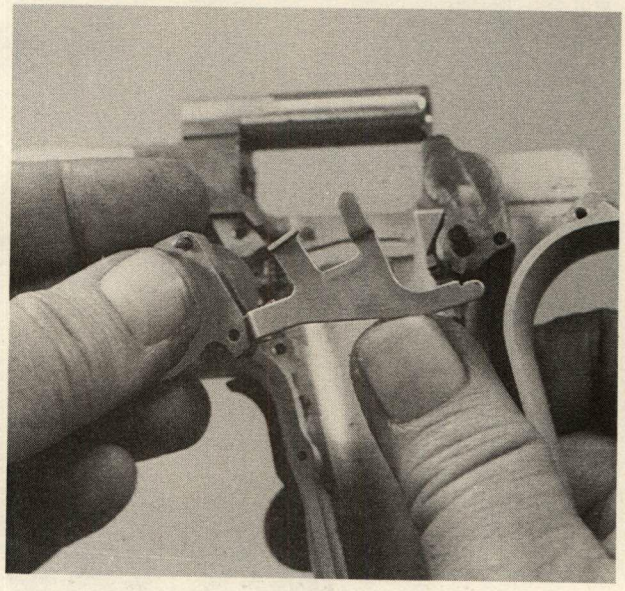


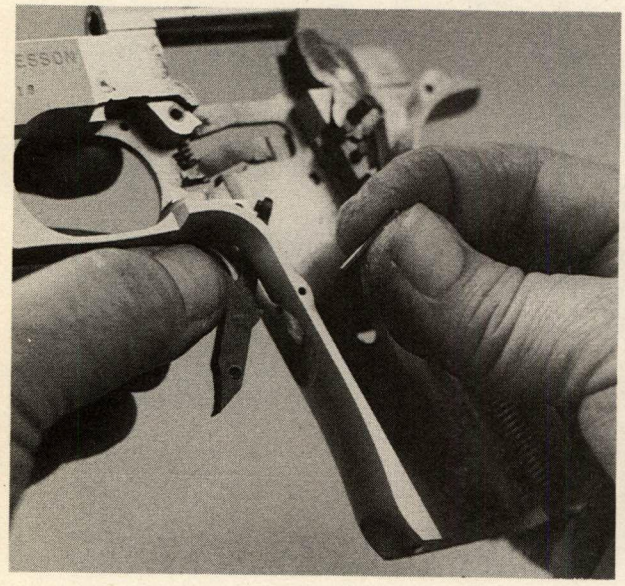
19. As the sideplate is removed, keep inward pressure on the trigger to hold it in place.

20. Detach and remove the combination trigger and magazine catch spring.

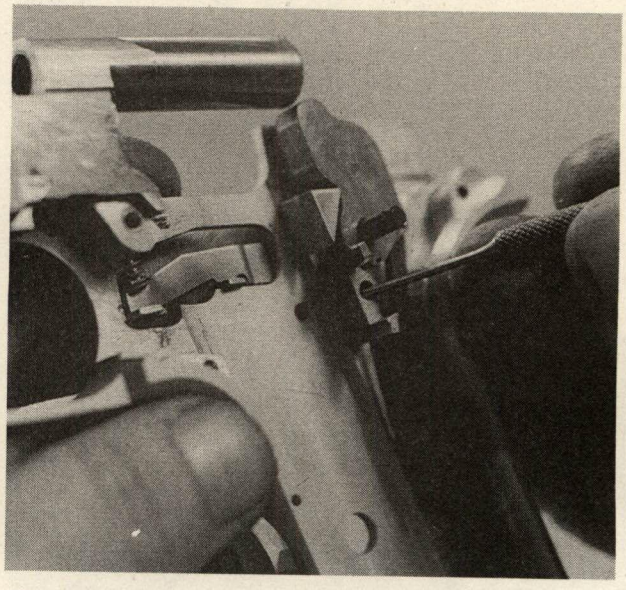


21. Remove the trigger, trigger pin, and the attached trigger bar. The bar is retained on the trigger by a cross-pin, and if necessary for repair this can be driven out for removal.



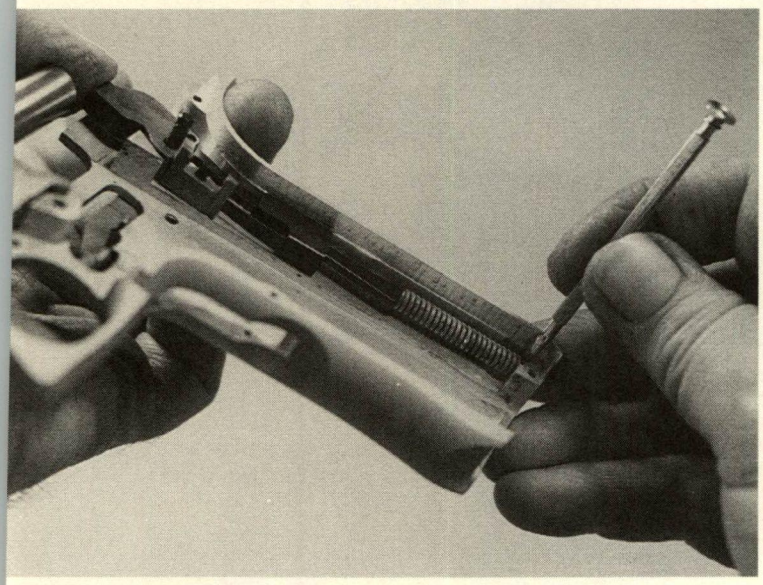


22. Push out the magazine catch cross-pin, and remove the magazine catch downward and toward the front.

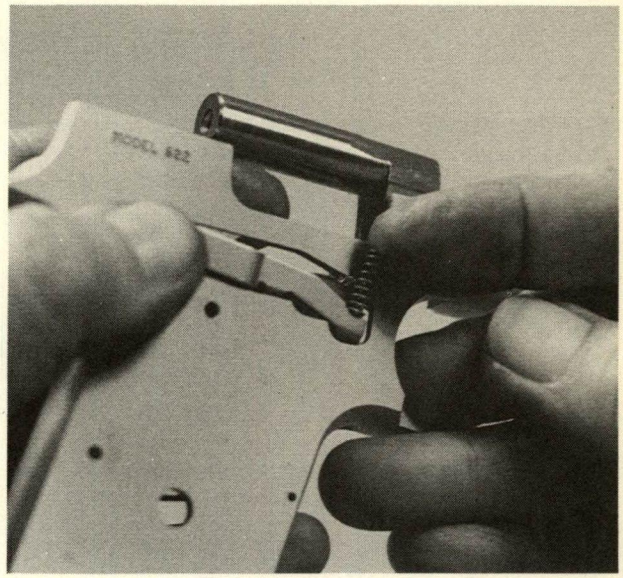


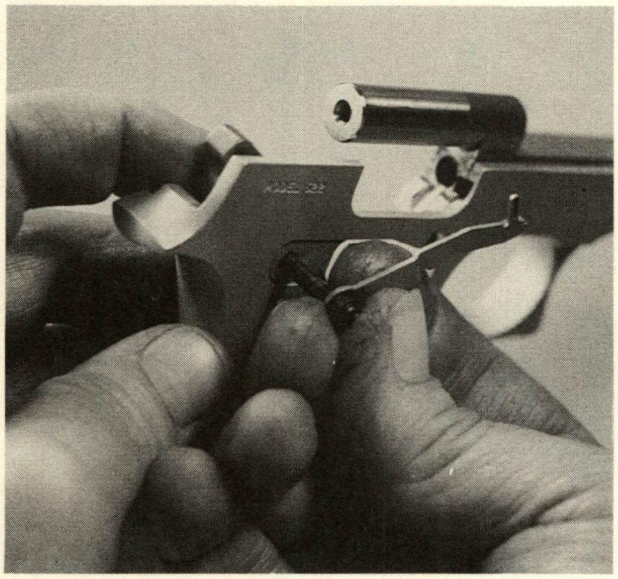
23. Push out the sear cross-pin, and remove the sear toward the left.

24. Move the hammer back until a small tool can be inserted in the hole in the lower tip of the hammer spring strut, as shown. Release the hammer, and the spring will be trapped on the strut.

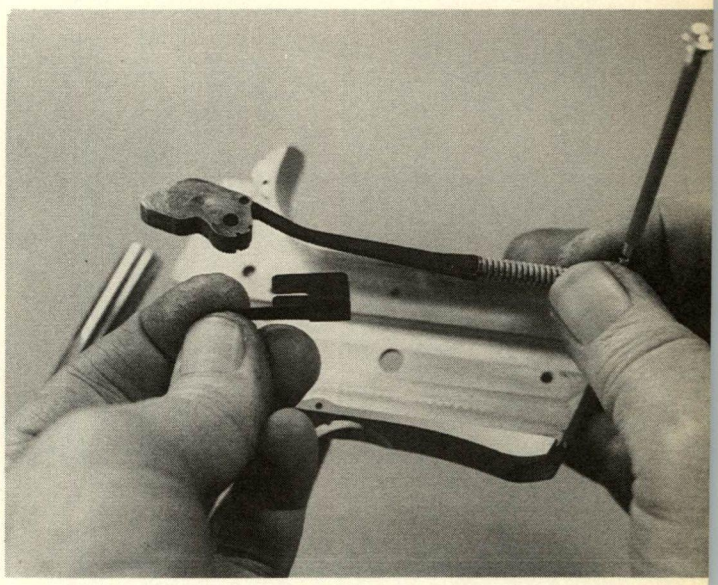


25. Detach the magazine safety spring, and remove it.





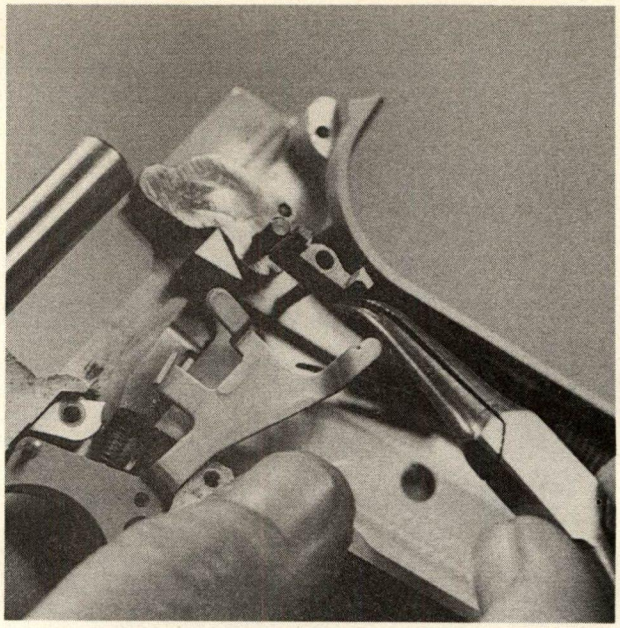
26. Remove the magazine safety and the hammer pivot toward the right.



27. Remove the hammer and hammer spring assembly toward the left. Removal of these parts will also free the sear spring for removal. If the hammer spring unit is to be disassembled, remember that the spring is powerful and is fully compressed. Use caution. With a special wrench, the barrel nut and lockwasher can be taken off at the muzzle, and the barrel unit removed rearward, but in normal takedown this is not done.

Reassembly Tips:

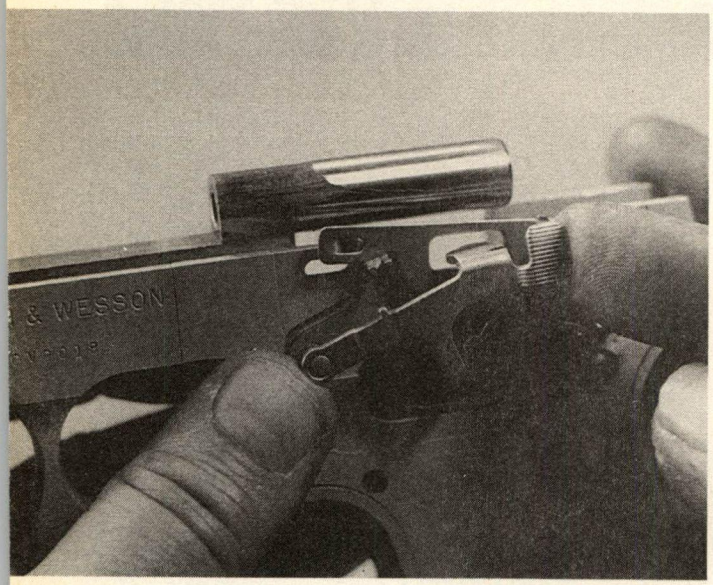
When reinstalling the magazine safety and the hammer pivot, note that the forward tip of the magazine safety must be inserted into the frame slot first, at an angle, before the hammer pivot is pushed into place. Also, the magazine safety must be lifted slightly at the front during insertion of the trigger assembly, for proper engagement with the trigger.



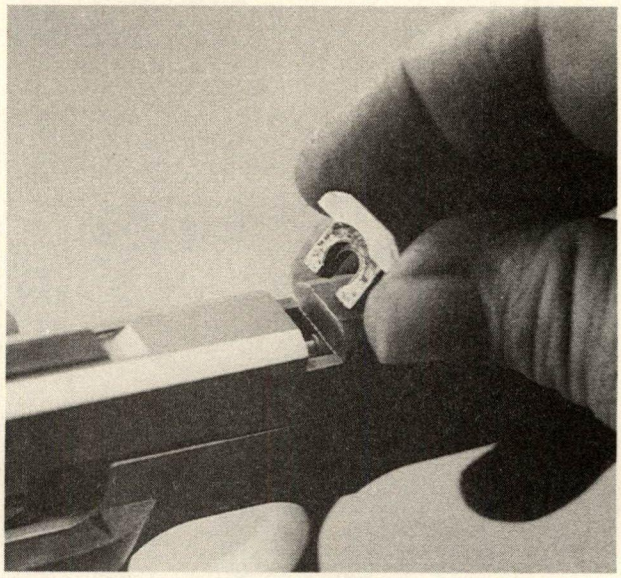
1. When installing the sear, note that it must be oriented as shown. Remember that the leaf of the sear spring must go behind the lower end of the sear.

When the sideplate is in place, insert a tool to cock the hammer.

2. For installation of the slide-latch, the spring plate must be in the slightly raised position.



3. When replacing the recoil guide plug, remember that the recess in its lower extension must be toward the rear.



Smith & Wesson 5906

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Smith & Wesson Model 5906 also apply to the following guns.

Smith & Wesson Model 3904
Smith & Wesson Model 3906
Smith & Wesson Model 4506
Smith & Wesson Model 4516
Smith & Wesson Model 5904
Smith & Wesson Model 6904
Smith & Wesson Model 6906

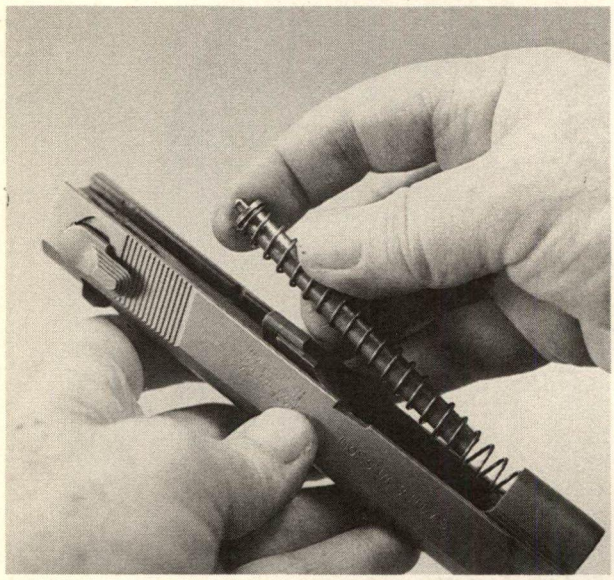
Data:	Smith & Wesson Model 5906
Origin:	United States
Manufacturer:	Smith & Wesson, Springfield, Massachusetts
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	14 rounds
Overall length:	$7^5/_8$ inches
Height:	$5^1/_2$ inches
Barrel length:	4 inches
Weight:	32.34 ounces

In 1988, Smith & Wesson redesigned their 9mm and 45 ACP pistols, and the new "third generation" guns were given different model designations. The Model 659, for example, became the Model 5906 shown here. These instructions can also be used for the models 5904, 3904, 3906, 6904, 6906, 4506, and 4516. If the pistol has the optional fully-adjustable rear sight, refer to the Smith & Wesson Model 459 section for removal instructions.

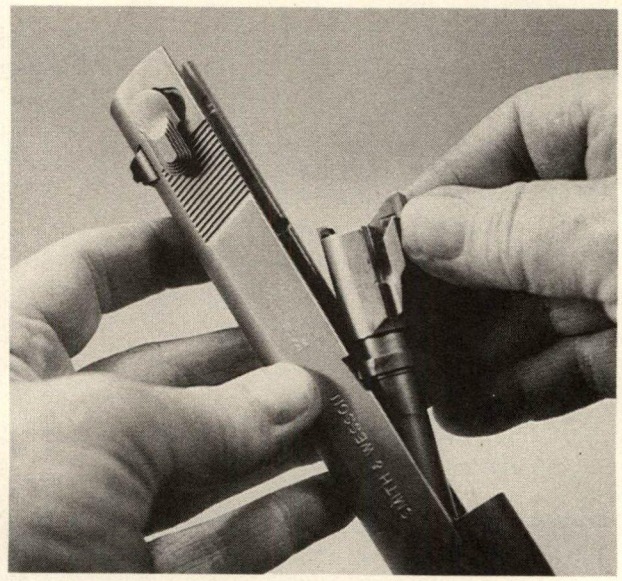
Field Strip:

1. With the magazine removed and the hammer cocked, retract the slide until the pivot base of the slide-latch is aligned with the latch notch in the lower edge of the slide. Push on the right tip of the slide-latch cross-shaft to start it out toward the left, and remove the slide-latch.

2. Move the slide and barrel assembly forward off the frame. The hammer will fall to the fired position as the slide is removed.

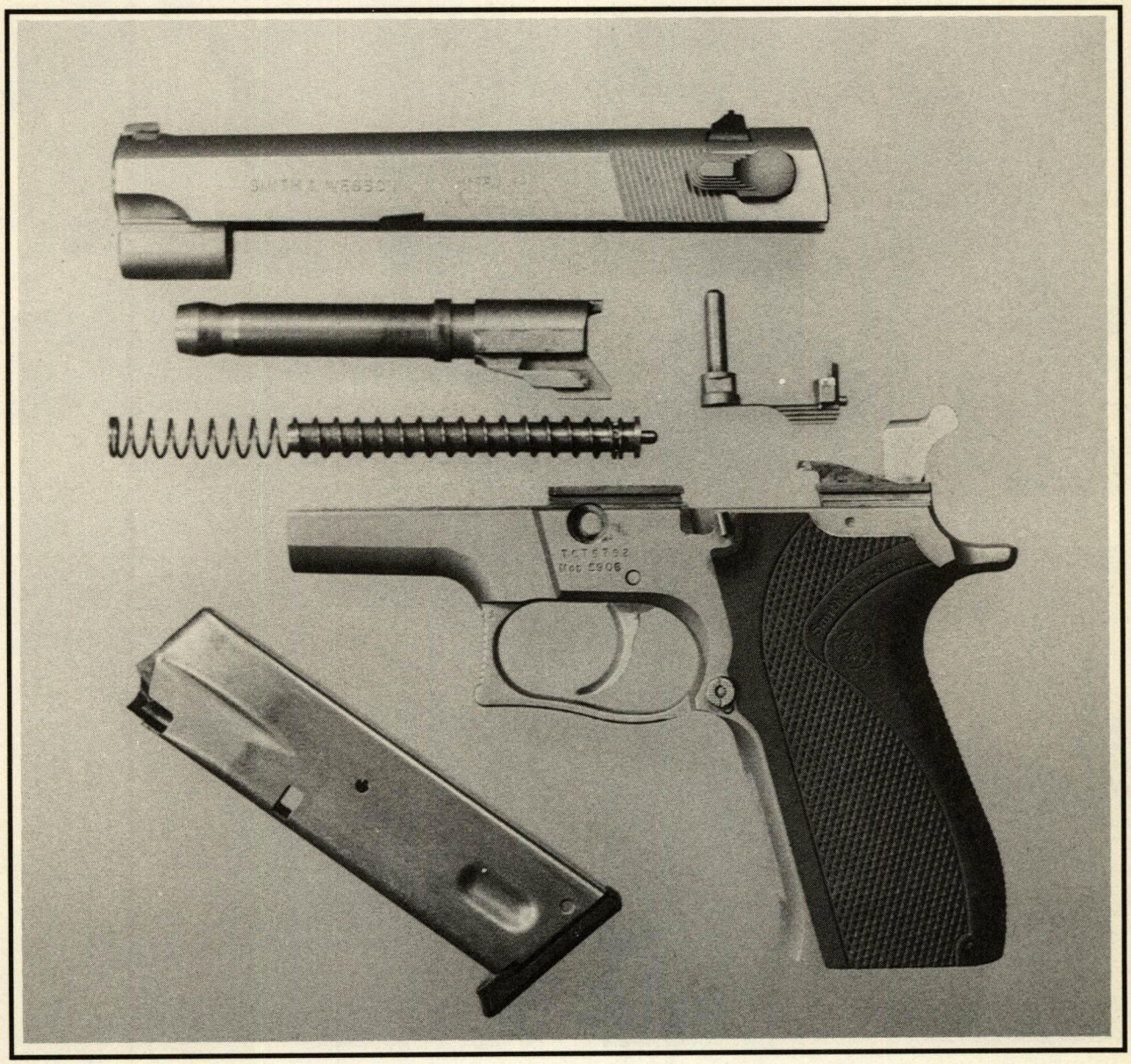


3. Grasp the recoil spring guide firmly to control the strong spring, and disengage the guide from its step on the barrel underlug. **Caution:** *The spring is under tension.*Remove the guide and spring rearward.



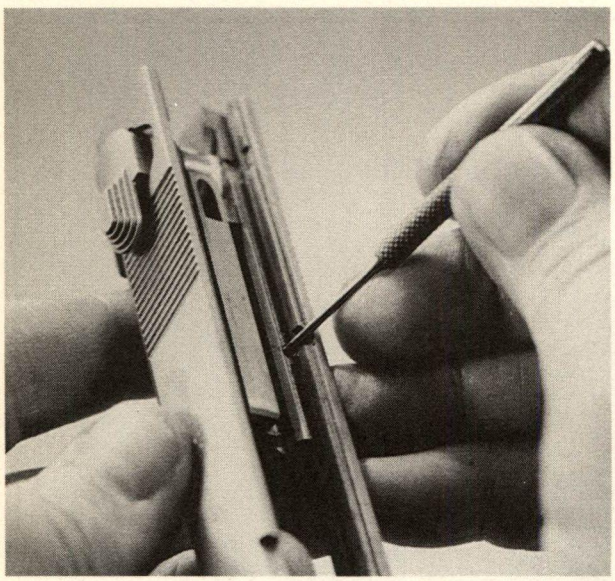
4. Remove the barrel from the underside of the slide. **Gun is now field-stripped.**

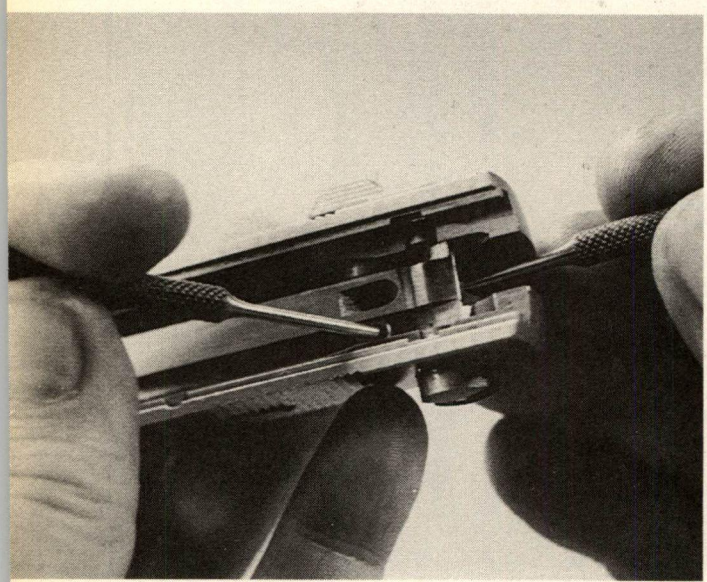
Smith & Wesson Model 5906 field-stripped



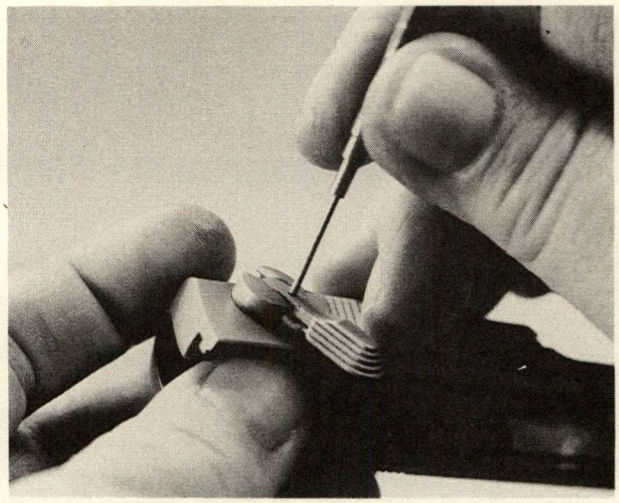
Detail Strip:

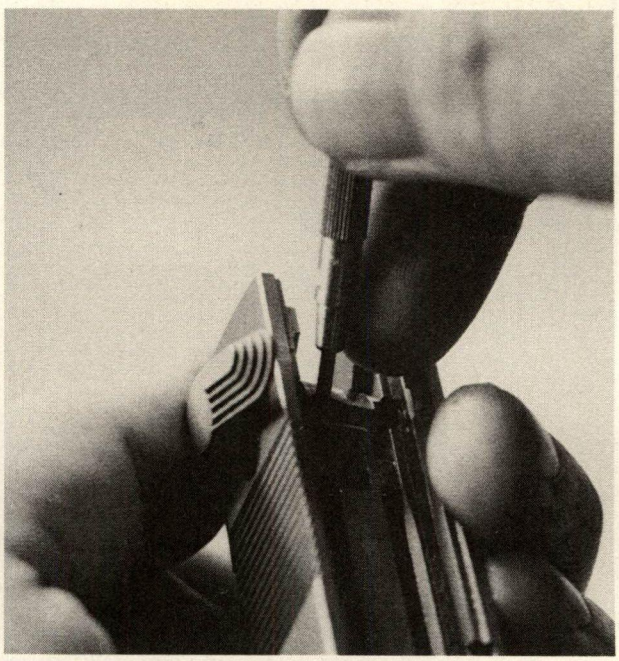
5. The extractor and its spring are retained on the right side of the slide by a vertical pin. Drive the pin out upward, and take off the extractor and spring toward the right.





6. Insert a small drift in the access hole at the center of the right safety-lever to depress the lock plunger, and slide the lever out of its T-slot in the safety. Restrain the plunger and spring as the lever clears.

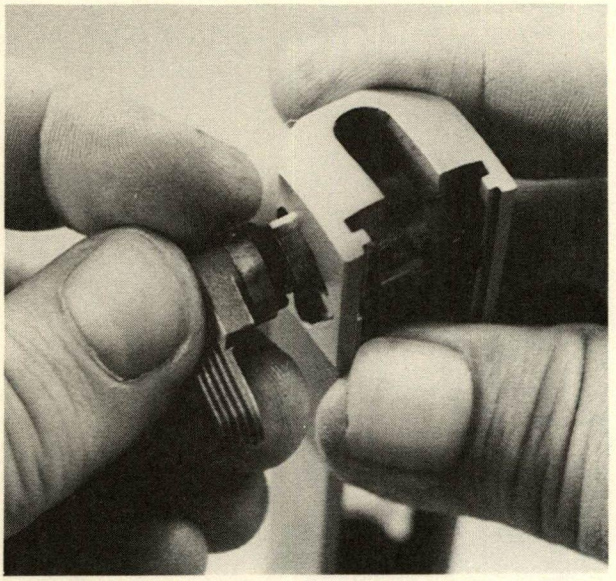




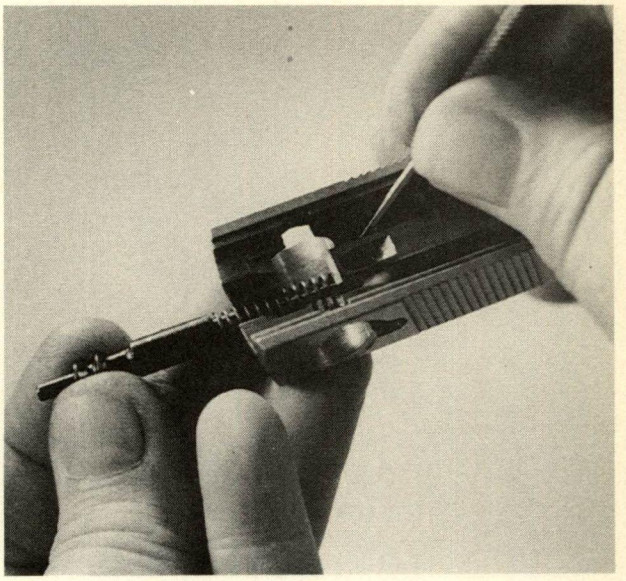
7. With the safety in the off-safe position, depress the firing pin block, and push the firing pin all the way forward. Release the block, holding the firing pin toward the front.

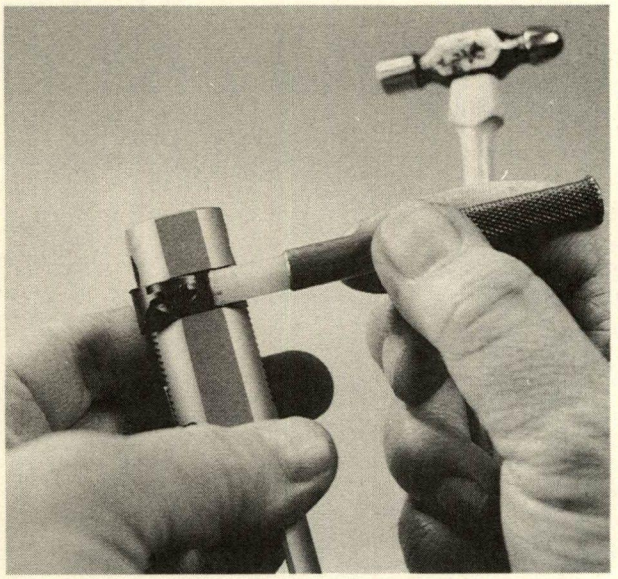
8. Turn the safety to the on-safe position, and insert a small tool to push the firing pin slightly more toward the front to clear. Move the safety out toward the left.

9. Restrain the safety positioning plunger and spring as they emerge with the safety at upper rear. Remove the safety toward the left.

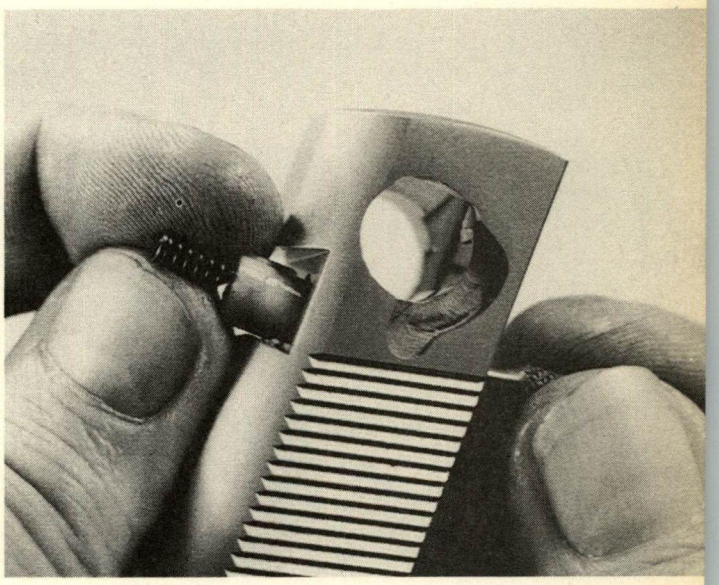


10. Restrain the firing pin, depress the firing pin safety block, and remove the firing pin and its spring toward the rear. **Caution:** *The spring is compressed, so control the firing pin, and ease it out.*



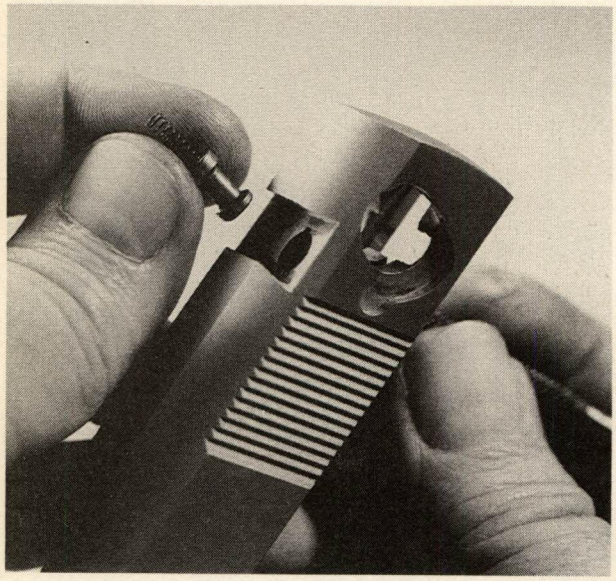


11. With a non-marring tool, drive the rear sight out of its dovetail toward the right. Restrain the two small coil springs as the sight clears them.

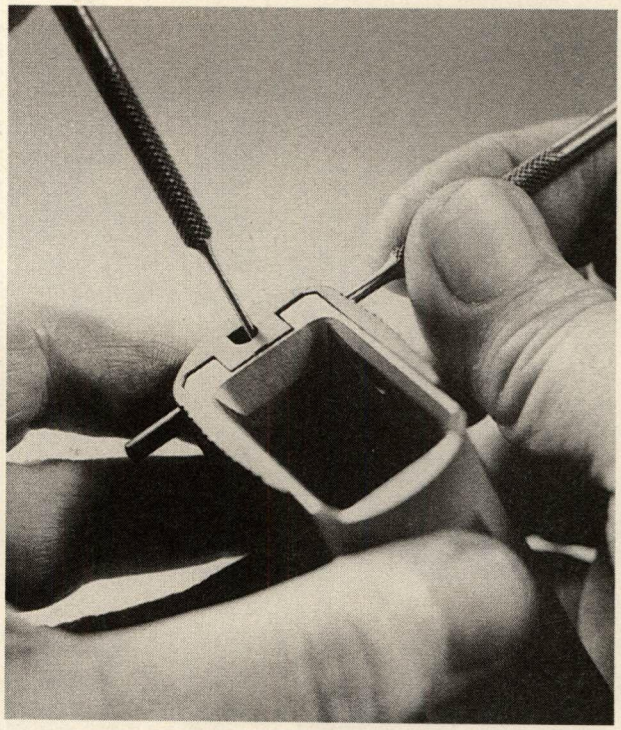


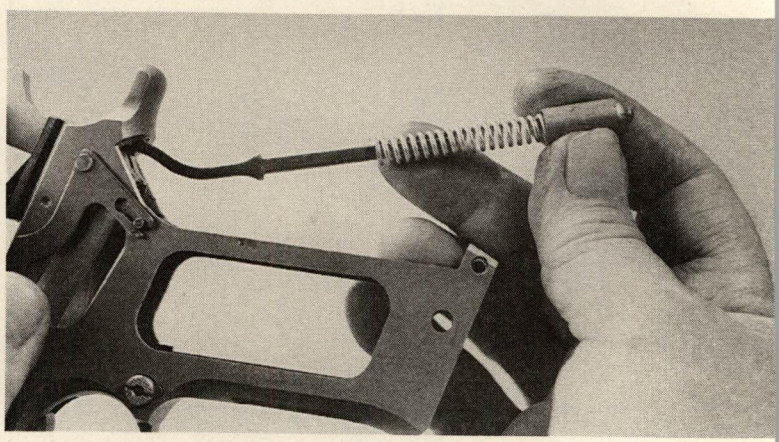
12. Remove the ejector depressor and its spring upward.

13. Remove the firing pin safety block and its spring upward.



14. Use a small drift to depress the plunger and spring, and push out the cross-pin in the lower rear of the grip piece.

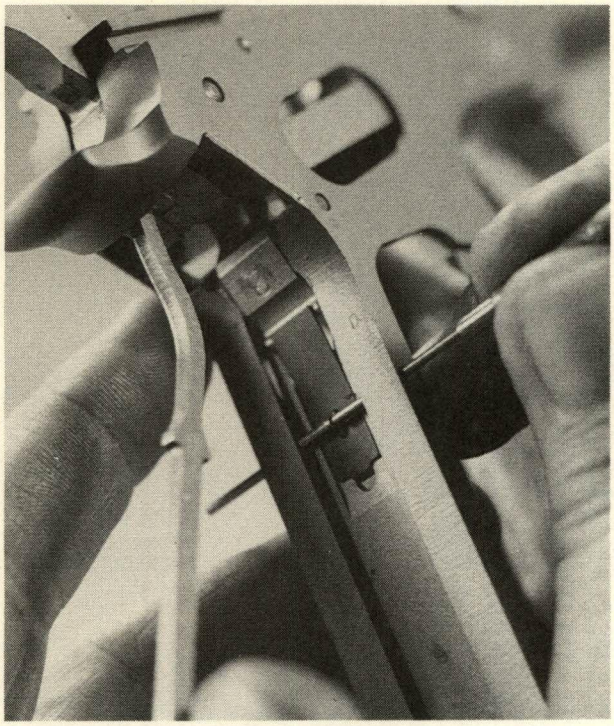




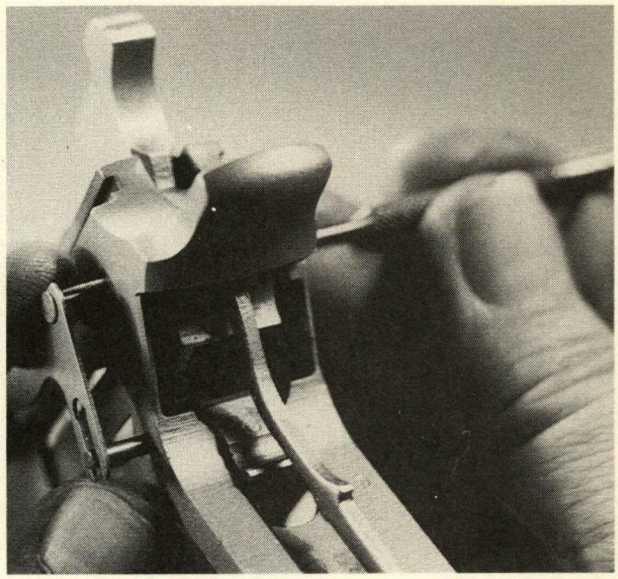
15. Move the grip piece downward and toward the rear for removal. It will be necessary to flex the side panels outward to clear the frame.

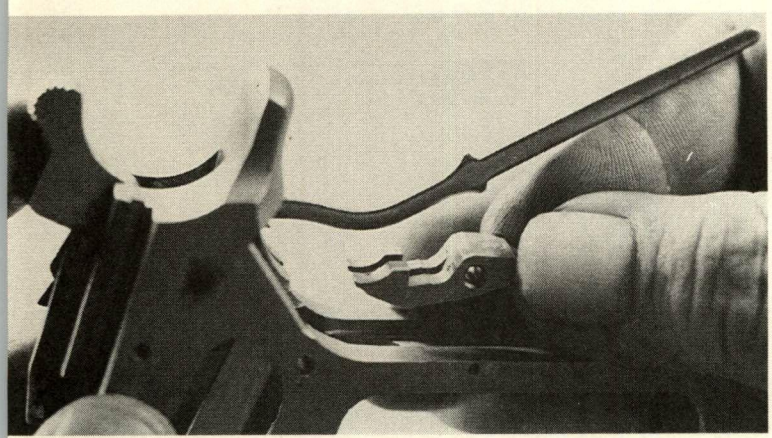
16. Remove the hammer spring and its plunger downward.

17. Push out the small cross-pin that retains the sear spring, and take the spring out toward the rear.

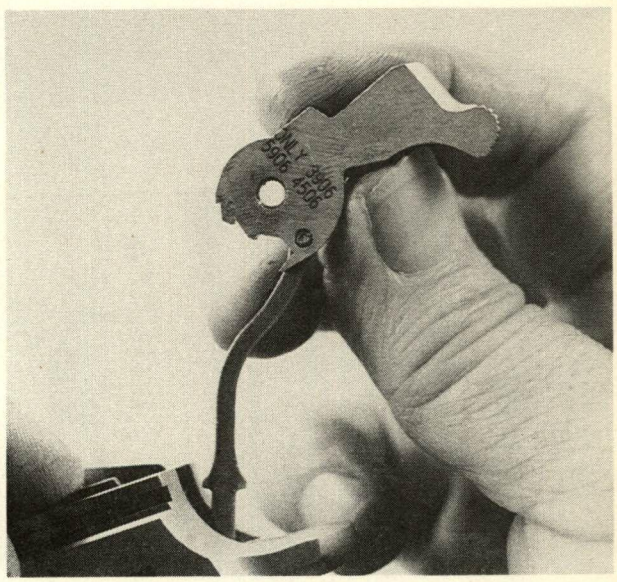


18. Push out the hammer pivot toward the left, along with the sideplate and the sear pivot.



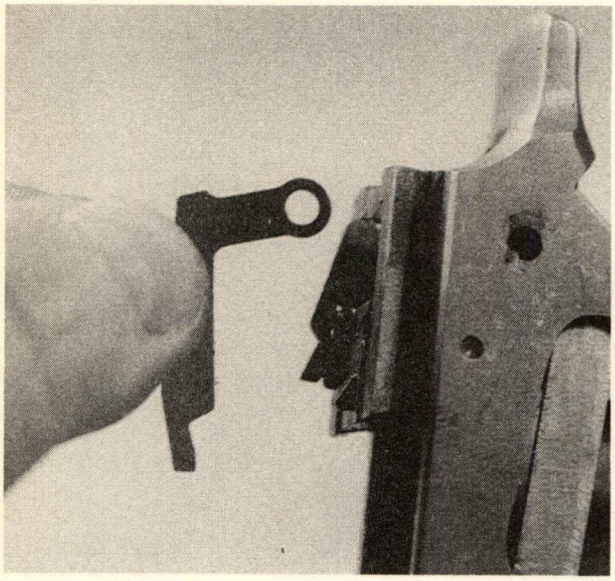


19. Remove the sear from the frame.

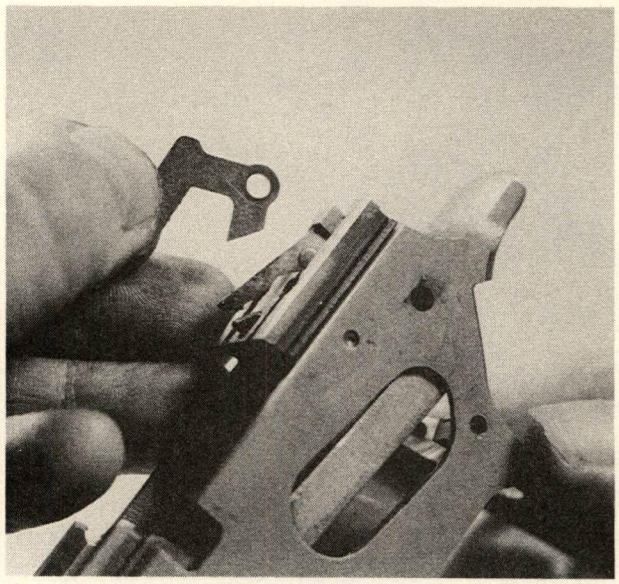


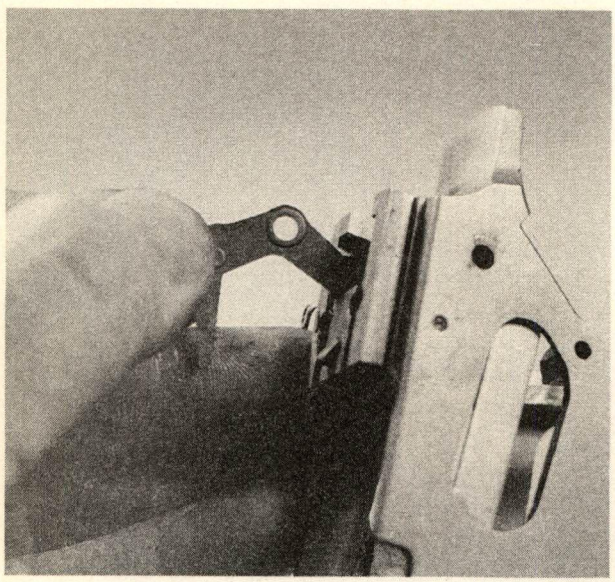
20. The hammer and hammer strut can now be taken out upward. If necessary, the cross-pin can be driven out to free the hammer strut.

21. The ejector and its spring are now free to be taken out upward.

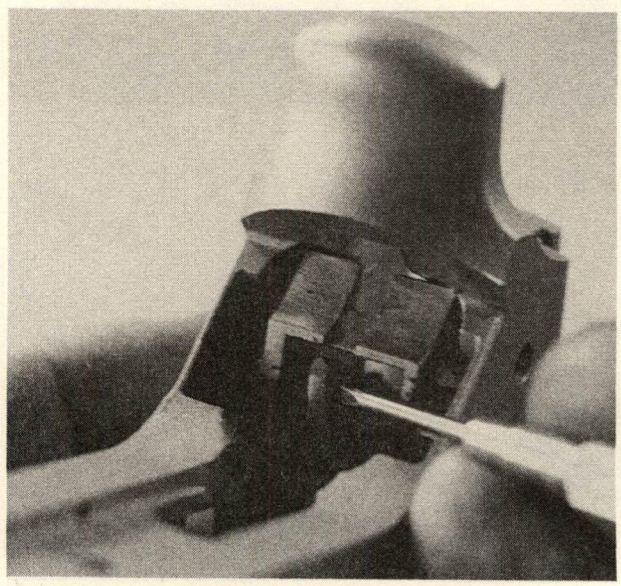


22. The sear trip lever can now be removed upward.



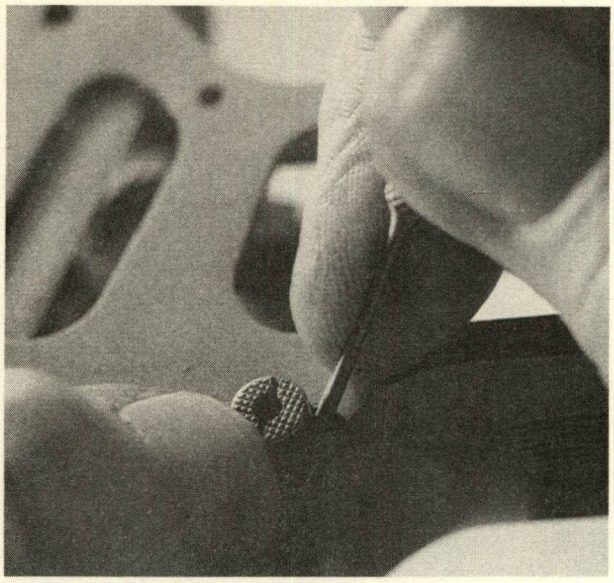


23. The firing pin safety block lever and the spring which powers it and the sear trip can now be taken out upward.

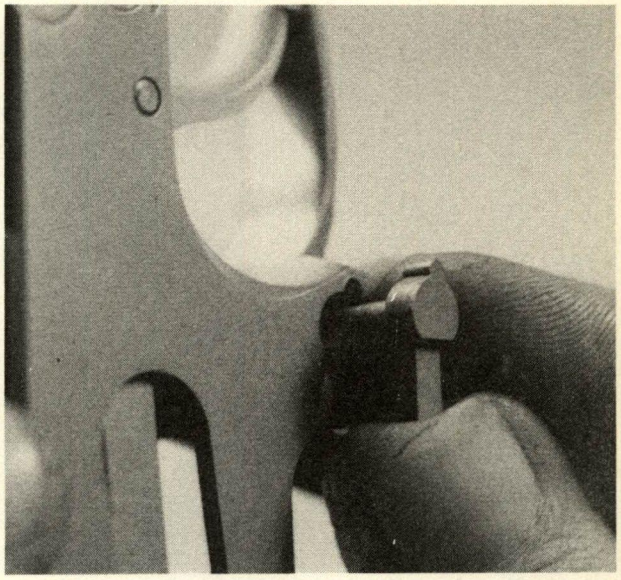


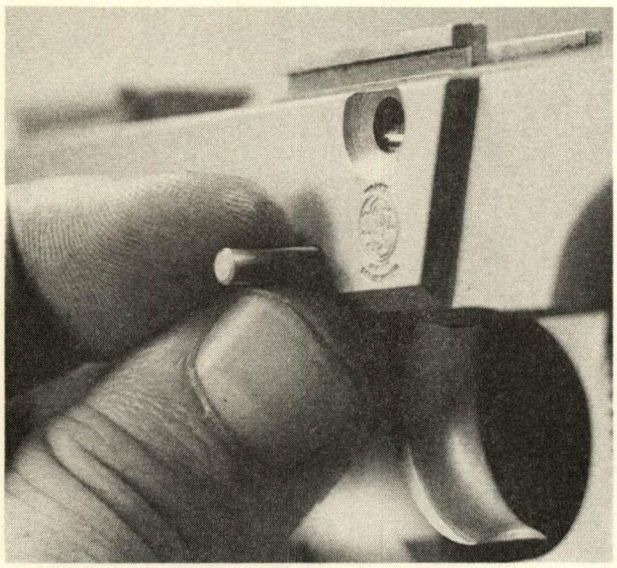
24. Turn the disconnector slightly in either direction, until it clears the trigger bar, and remove it downward.

25. Depress the small lock plunger beside the magazine catch button, and unscrew the button from the catch. A tool slot is provided in the button, but removal is usually easy to do with a thumbnail.

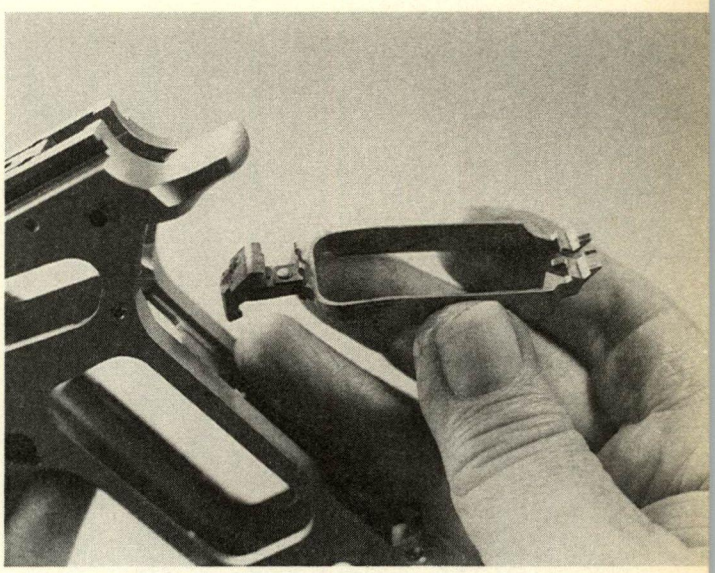


26. Remove the button and the spring and plunger toward the left, and the magazine catch toward the right.



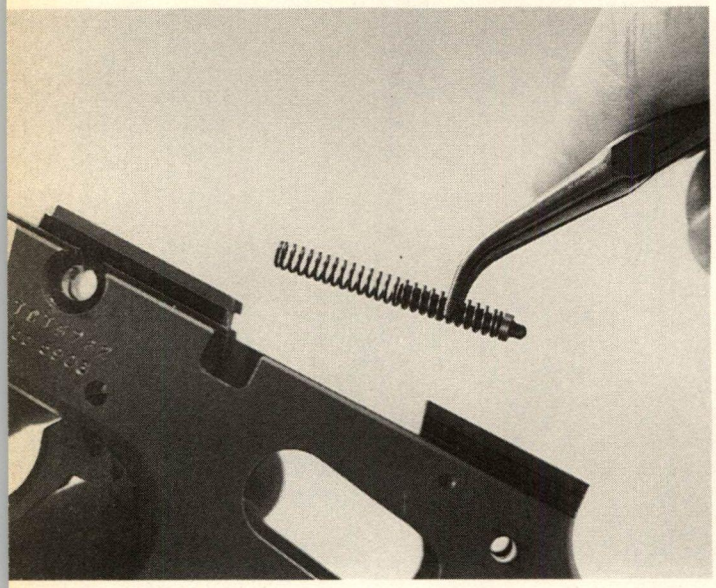


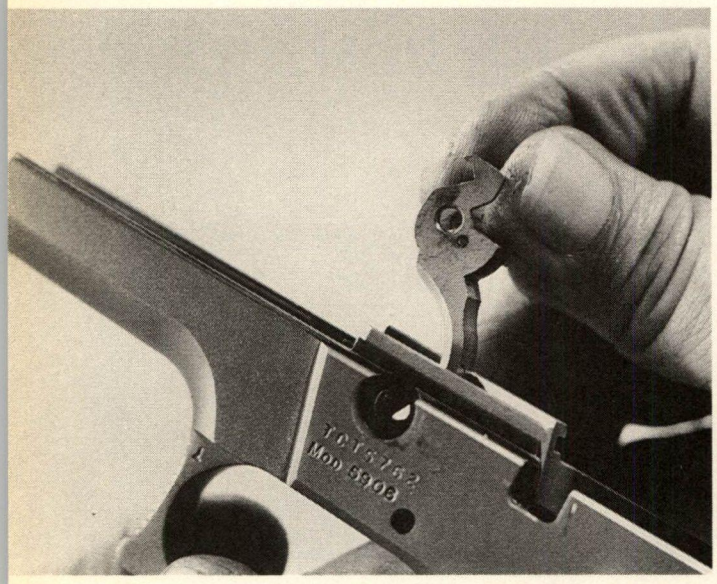
27. Drift out the trigger cross-pin.



28. Remove the trigger bar assembly toward the rear. The trigger play spring on the bar is riveted in place, and it is not routinely removed.

29. Remove the trigger spring and plunger from the frame.



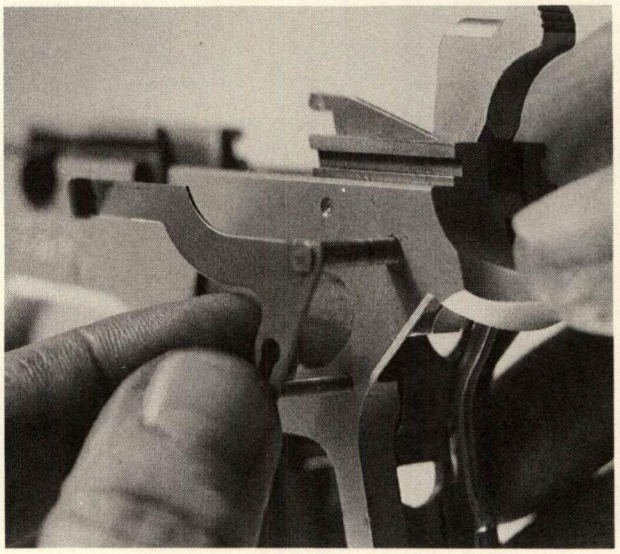


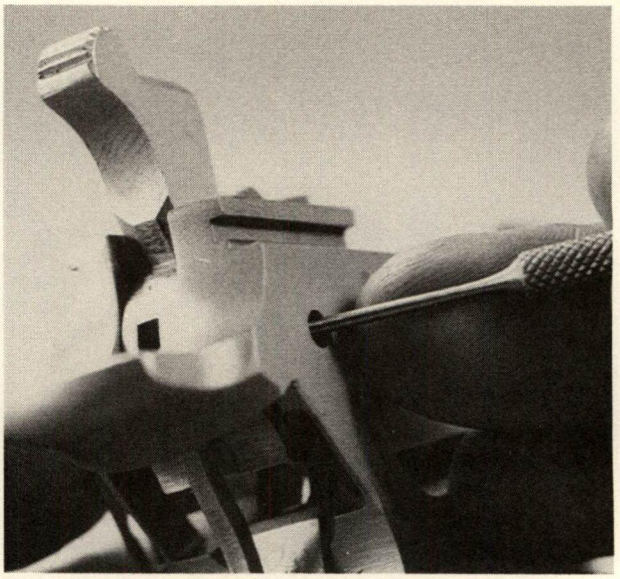
30. Remove the trigger forward and upward. A cross-pin in the top of the trigger retains the trigger pin plunger and spring. These are not removed in normal takedown.

Reassembly Tips.

When replacing the trigger assembly, insert a small tool to insure that the small tip of the trigger spring plunger enters the hole in the front of the trigger bar.

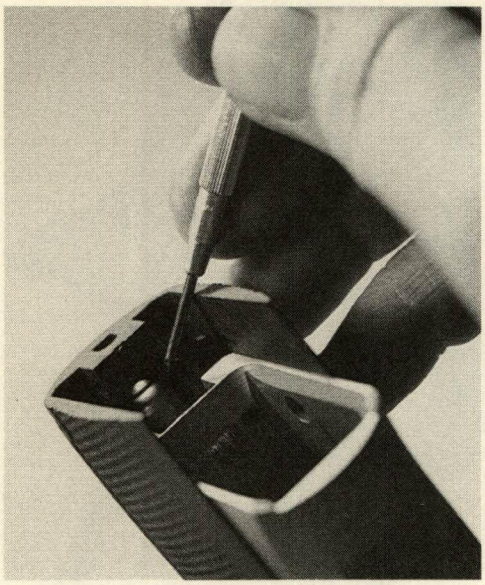
1. Position the hammer, sear, and ejector, and the two levers on the right in the frame, then push the sideplate bearing the hammer and sear pivots into place.



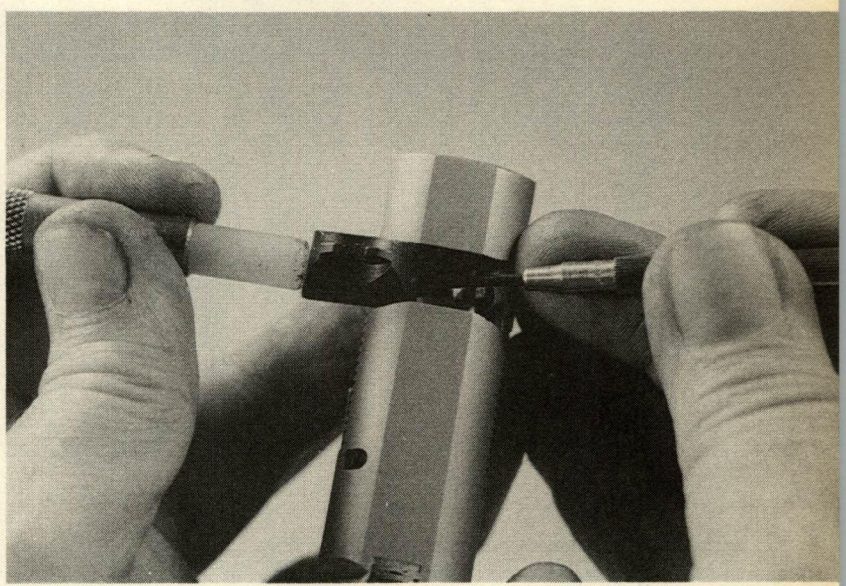


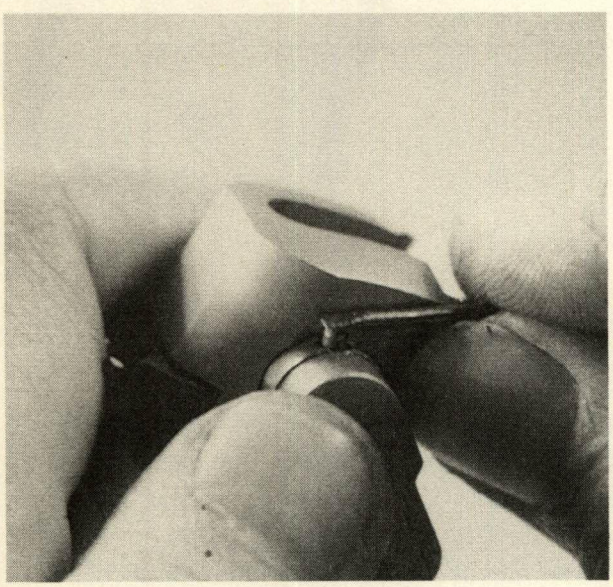
2. A small tool can be used to guide the firing pin block lever and the sear trip into place as the pivot is pushed across.

3. When pushing the grip piece back into place, be sure the hammer spring plunger is properly aligned.

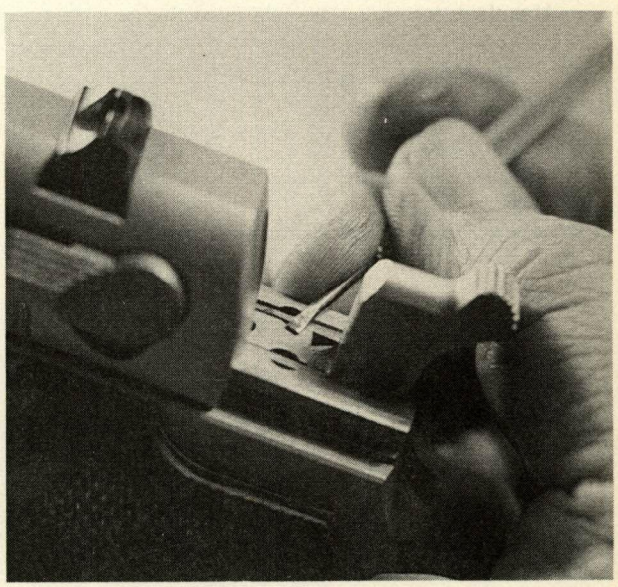


4. When installing the rear sight, use a tool to keep the springs vertical as the sight is pushed into place, to avoid deformation of the springs.





5. When replacing the safety system, use a tool to depress the positioning plunger as the safety is pushed into place.



6. As the slide is pushed back onto the frame, the three small levers at the rear of the frame must be depressed to clear the slide.

Star PD

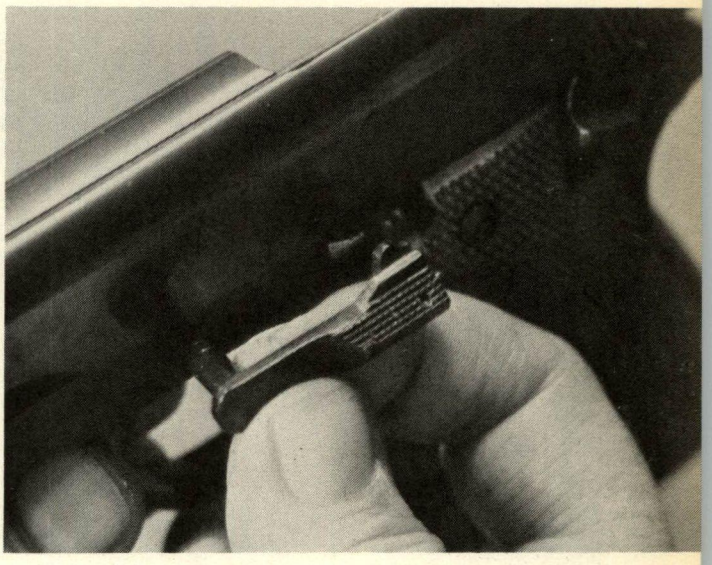
Data:	Star Model PD
Origin:	Spain
Manufacturer:	Bonifacio Echeverria, S.A., Eibar
Cartridge:	45 Auto (45 ACP)
Magazine capacity:	6 rounds
Overall length:	7 inches
Barrel length:	3.94 inches
Weight:	25 ounces

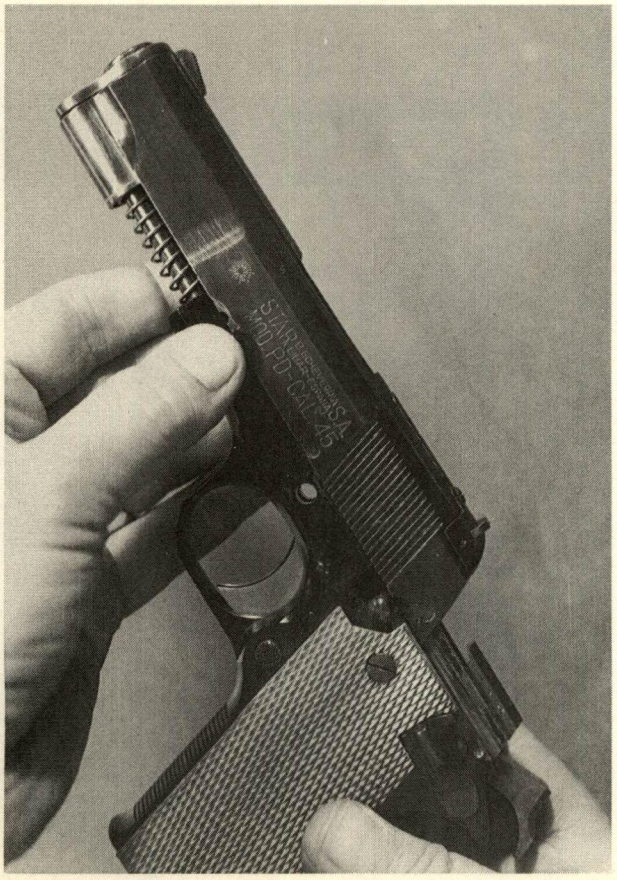
One of the two smallest automatics in 45 ACP, the PD is the lightest in this caliber and the only one in its class with fully adjustable sights. As with the other Star centerfire pistols, it is a redesign of the basic Colt/Browning Model 1911 style, with an entirely different internal mechanism. The manual safety is particularly outstanding, as it directly blocks the hammer when applied. Like all Star pistols, the Model PD is of high quality in both materials and workmanship.

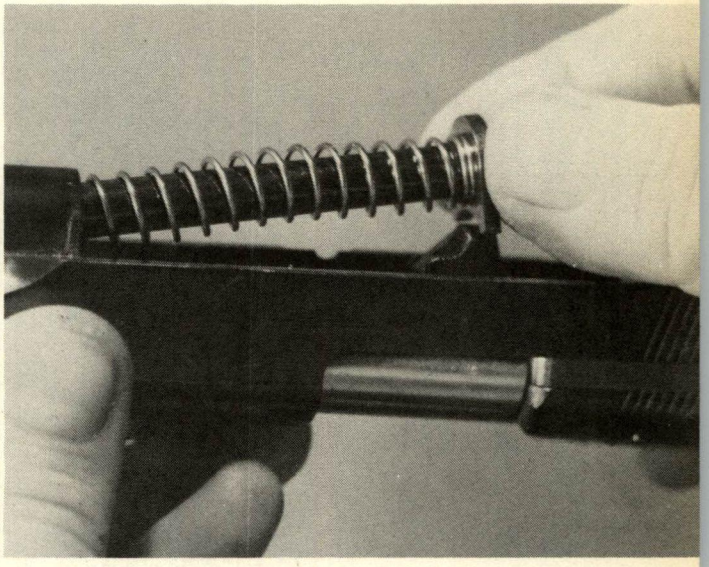
Field Strip:

1. Remove the magazine and lock the slide open by swinging the manual safety up into its forward recess.

2. Start the slide-latch out by pushing on the end of its cross-shaft on the right side, and remove the latch to the left.



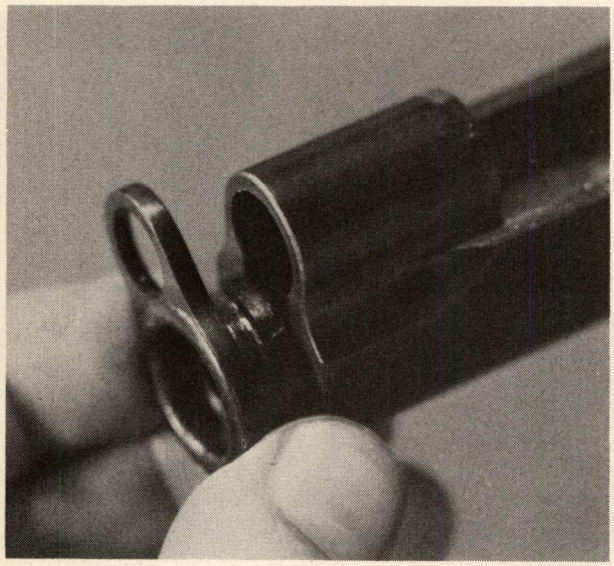




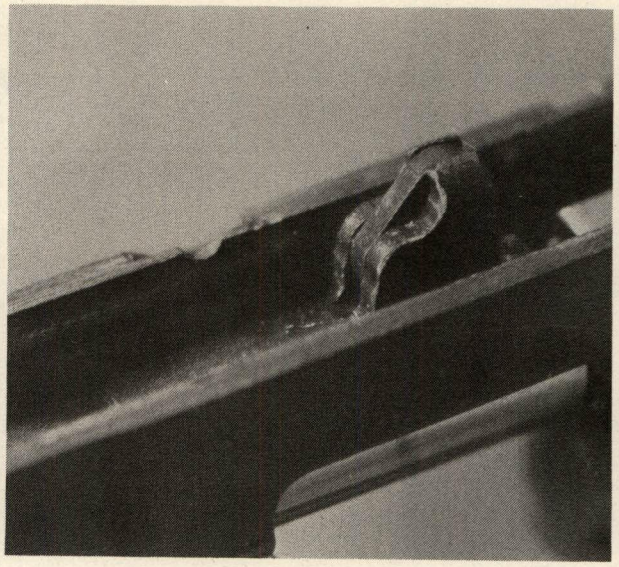
4. Lift the recoil spring guide at the rear, and take out the guide and spring toward the rear of the slide.

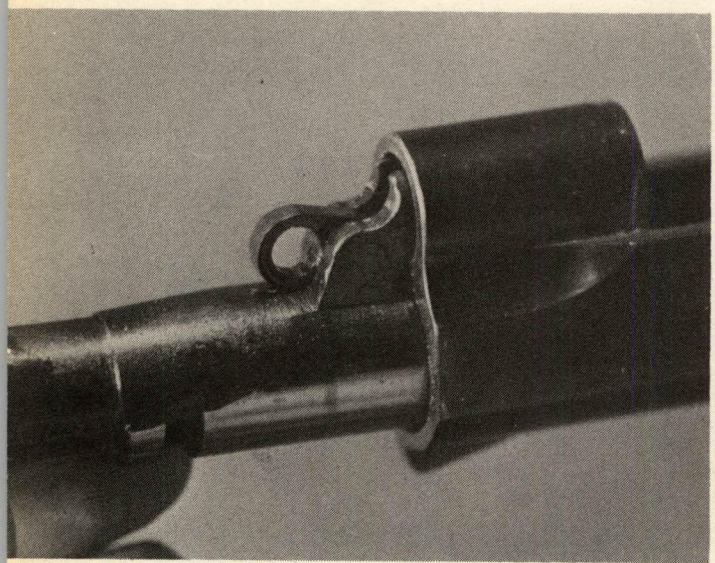
3. Holding the slide against the tension of the recoil spring, release the safety and run the slide assembly toward off the frame.

5. Turn the barrel bushing to the left side of the slide until its lug aligns with the open track in the slide underlug, and remove it toward the front.

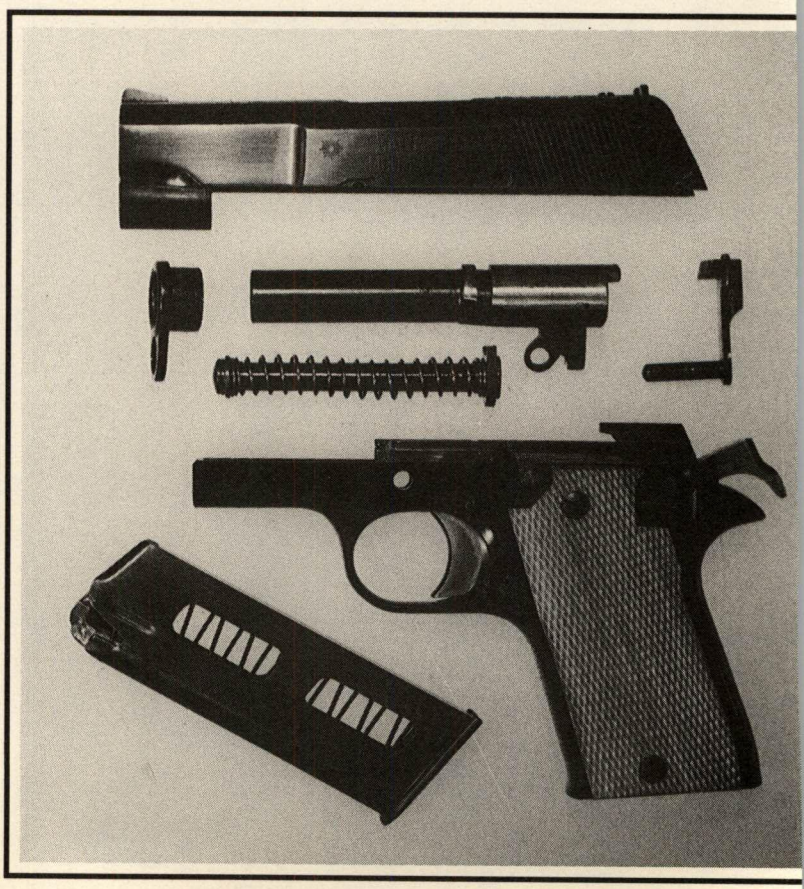


6. With the barrel link tipped either back, as shown, or fully forward, move the barrel toward the front of the slide.





7. Withdraw the barrel from the front of the slide. **Gun is now field-stripped.**

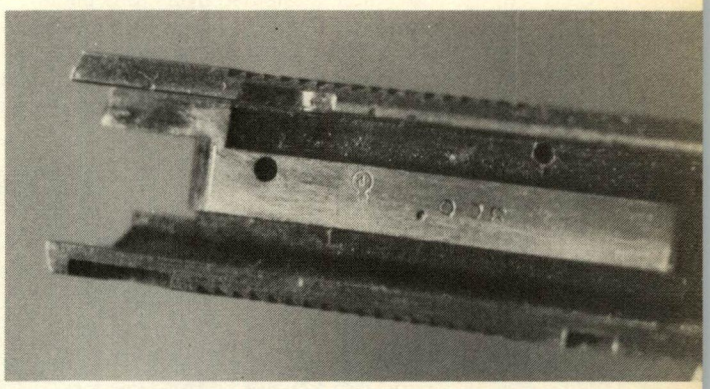


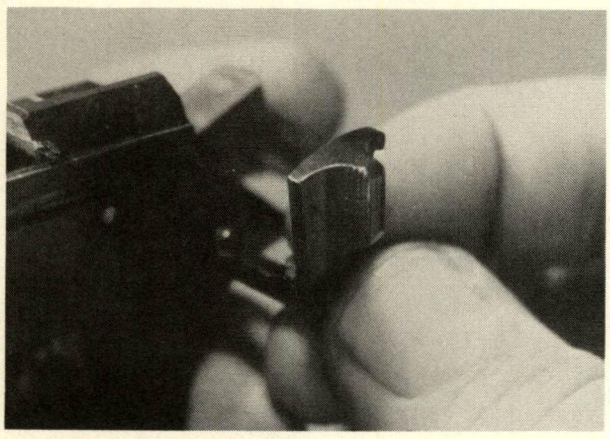
Star PD field-stripped

Detail Strip:

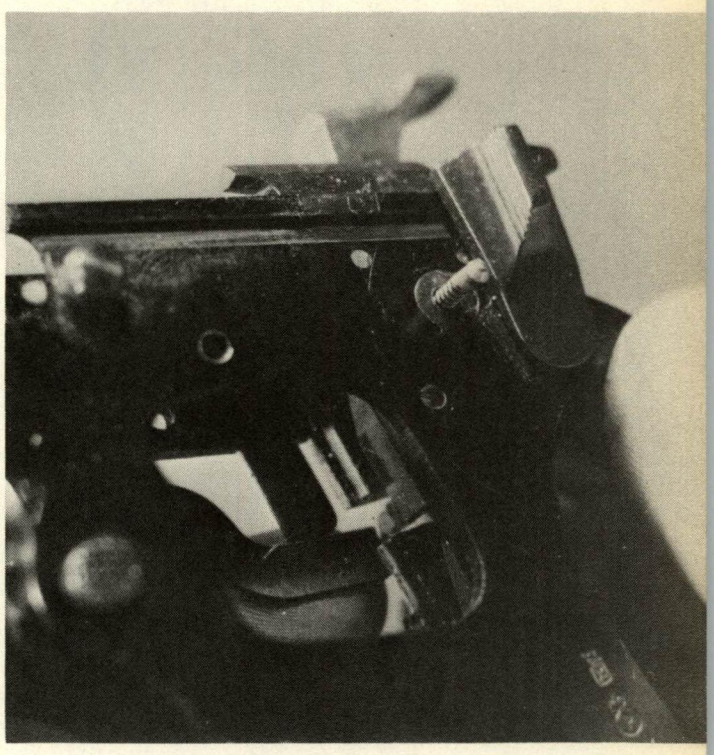
8. After removal of the elevation screw, the rear sight is depressed at the front and slid out toward the rear.

9. After the rear sight is removed, the firing pin retainer can be pushed out from the underside, through the hole shown at left in this photo. Drifting out the pin in the hole at right from bottom to top will release the extractor and its spring.





10. Holding the hammer back as far as it will go, turn the safety-lever up to the position shown and withdraw it to the left. **Caution:** *Take care to restrain the safety spring and plunger, mounted in the hammer pivot, as these will be released as the safety is turned up.*



11. Remove the safety plunger and spring from the hammer pivot.

12. The hammer pivot is drifted out from right to left. **Caution:** *Spring is compressed, ease it out, along with its plunger.*The small pin at the lower rear of the grip frame retains the flat sear spring. The pin at the lower right of the hammer pivot retains the sear, and the pin at the upper right of the hammer pivot holds the ejector and its base. The magazine release and its retainer and spring are removed in the same manner as on our Model 1911 pistol (q.v.). The trigger is retained by a cross-pin and is removed toward the rear, along with its connector bar. Spring the connector bar slightly out to clear the frame as the trigger is moved rearward. After the trigger is removed, the disconnector can be slid down and off.

Reassembly Tips:

When replacing the hammer spring and the follower in the grip frame, it can be pushed down with a tool until its tip is seen in a large hole at the lower rear of the grip frame, and a paper clip or small pin can be inserted in the cross-hole in the lower tip of the follower to hold it in place while installing the hammer. This can also be used in disassembly, especially if removal of the mainspring is not desired. This is a strong spring, so take care when compressing or releasing it.

When replacing the safety-lever in the frame, turn it down until its edge is just beside the spring and plunger, depress the plunger, and move the safety over it. Take care that it is not released accidentally, as it is small and can travel quite a distance.

When installing the recoil spring and guide, be sure the barrel link is tipped toward the rear.

When replacing the slide-latch, insert it through the frame and barrel link before retracting the slide and locking it open with the safety, then partially withdraw the latch, position it over its rear opening, and push it in.

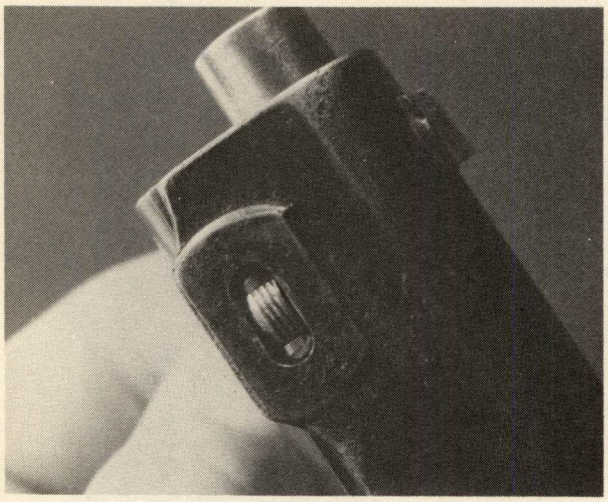
Steyr 1912

Data:	Steyr Model 1912 (Steyr-Hahn)
Origin:	Austria
Manufacturer:	Waffenfabrik Steyr
Cartridge:	9mm Steyr
Magazine capacity:	8 rounds
Overall length:	$8\frac{1}{2}$ inches
Height:	$5\frac{5}{8}$ inches
Barrel length:	$5\frac{3}{16}$ inches
Weight:	34 ounces

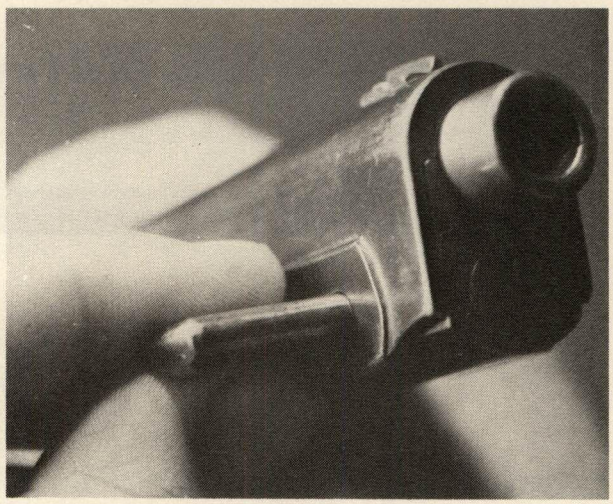
The Austro-Hungarian Empire was the first major power of its time to adopt an automatic pistol as military standard, and it chose the Model 1907 Roth-Steyr. In 1911, when Karel Krnka designed the pistol covered here, it was called the Steyr-Hahn (Hahn means "hammer") to separate it from the previous pistol. The Steyr-Hahn was adopted for military use in 1912. As with all Krnka designs, it is beautifully engineered, and like all guns made by Steyr it is finely machined of the best materials. It was produced with much hand fitting, and the joining of all parts is quite precise.

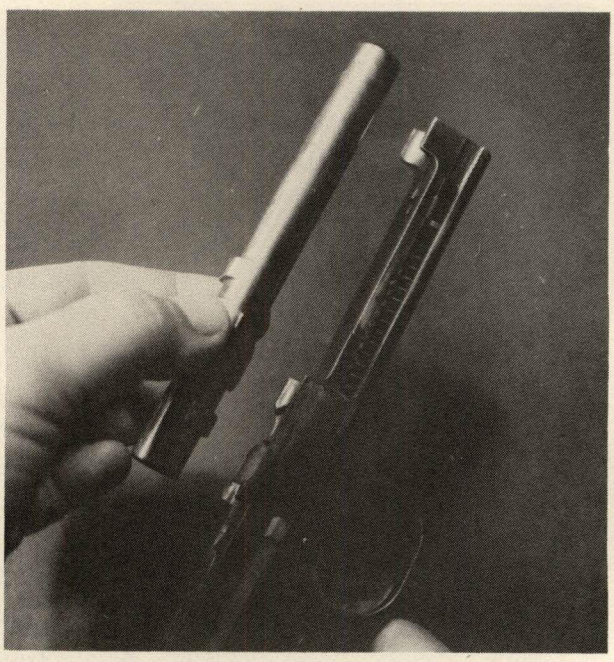
Field Strip:

1. The takedown-latch is a cross-bar at the lower front of the slide. It is possible to insert it from either side, but the proper placement is with the release on the left side, with the release either up or down, as shown. Depress the release and push the bar toward the right side of the slide.



2. When the bar has been pulled out until it stops, depress the release spring (it is marked with an arrow) and withdraw the bar from the slide.





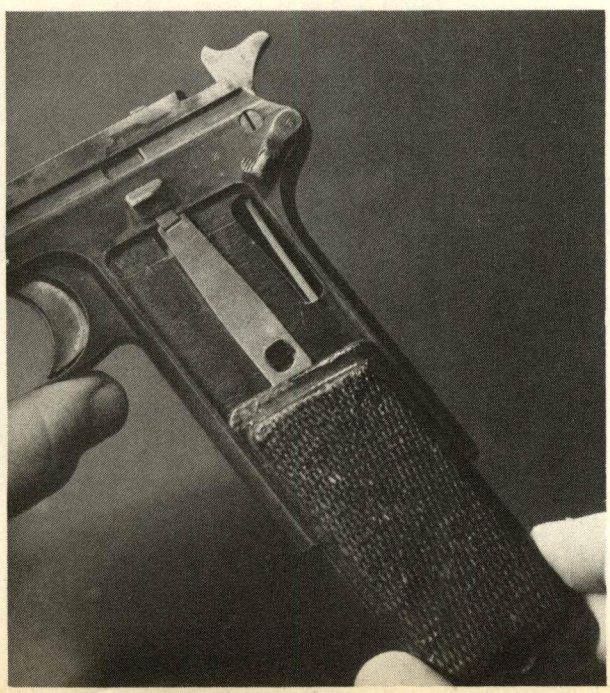
4. Lift the barrel from its recesses in the top of the frame. **Gun is now field-stripped.**

3. Draw back the slide until it stops, and lift it up and off the frame.

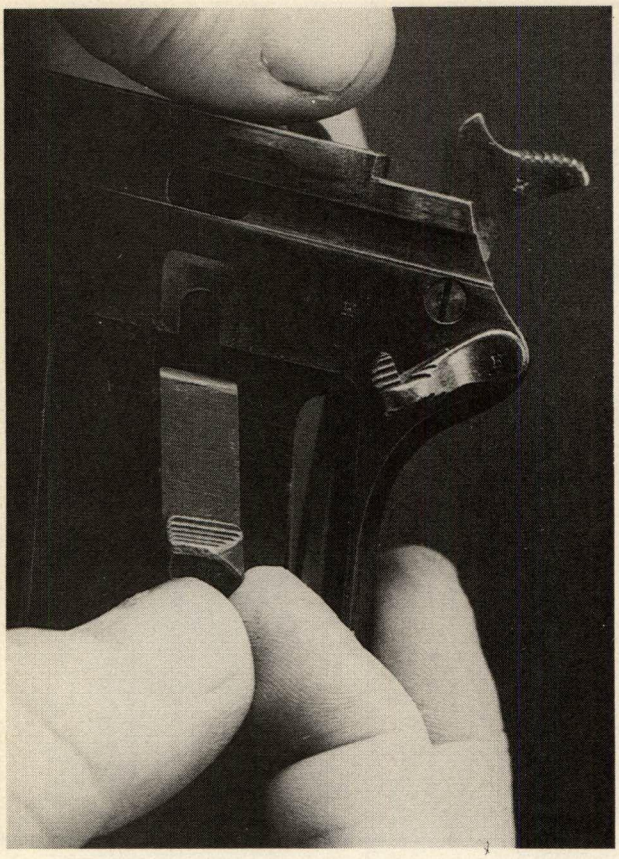
Steyr 1912 field-stripped

Detail Strip:

5. Remove the cross-screw at lower center of the grip frame and slide the grip panels downward and off the frame.

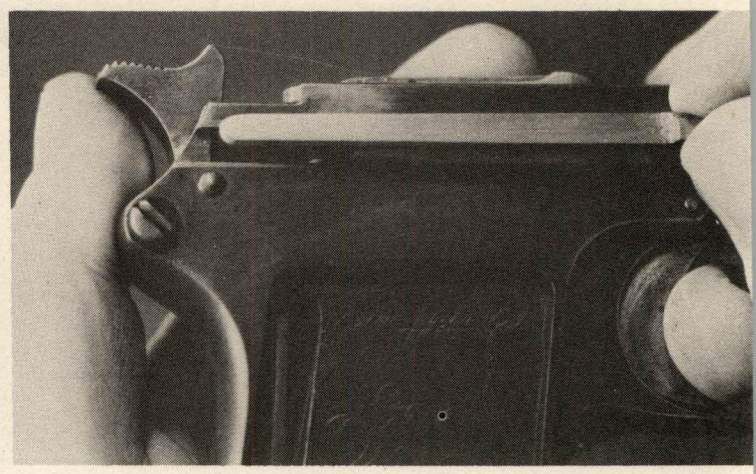


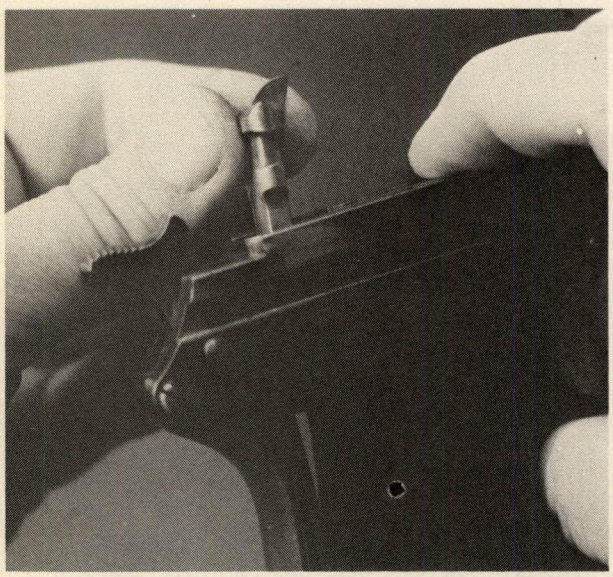
6. Depress the upper end of the slide-latch spring and turn it from beneath the slide-latch. Continue turning it until it can be freed from its stud on the frame.



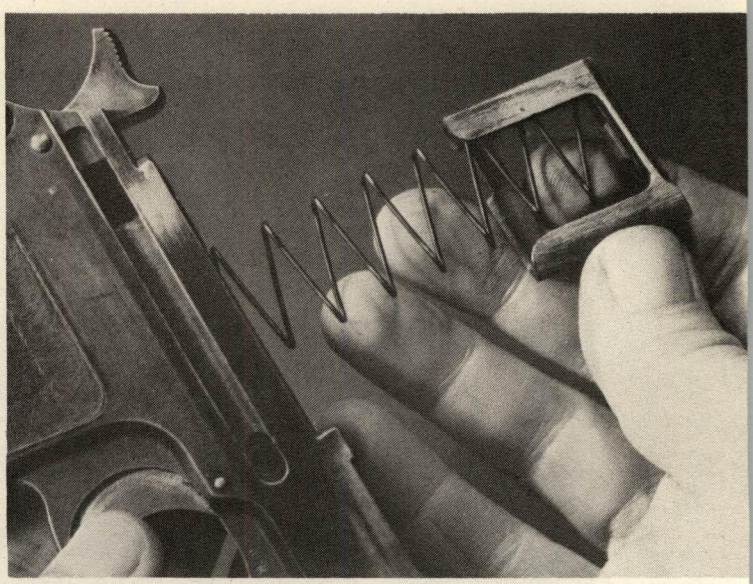
7. Remove the slide-latch downward.

8. Lift the trigger bar from its recess on the right side of the frame.



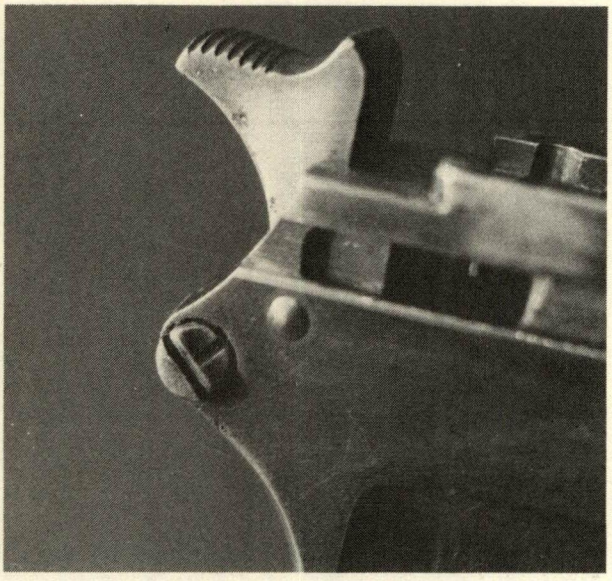


9. Depress the magazine follower and remove the ejector from the top of the frame.

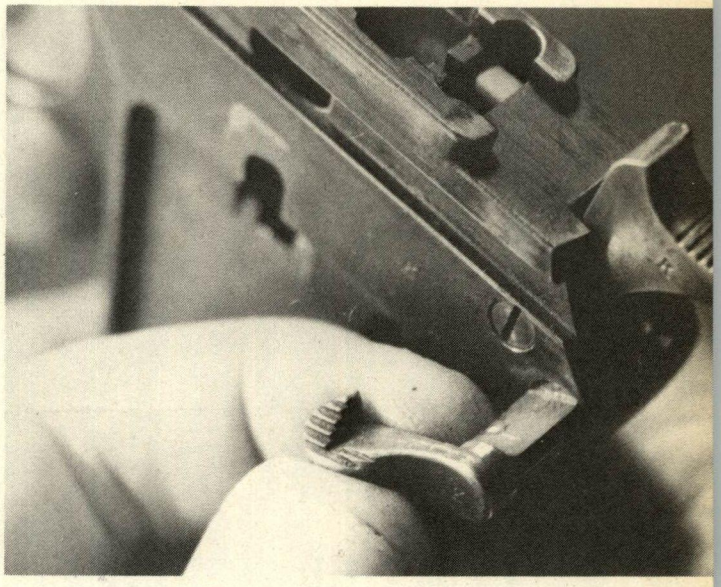


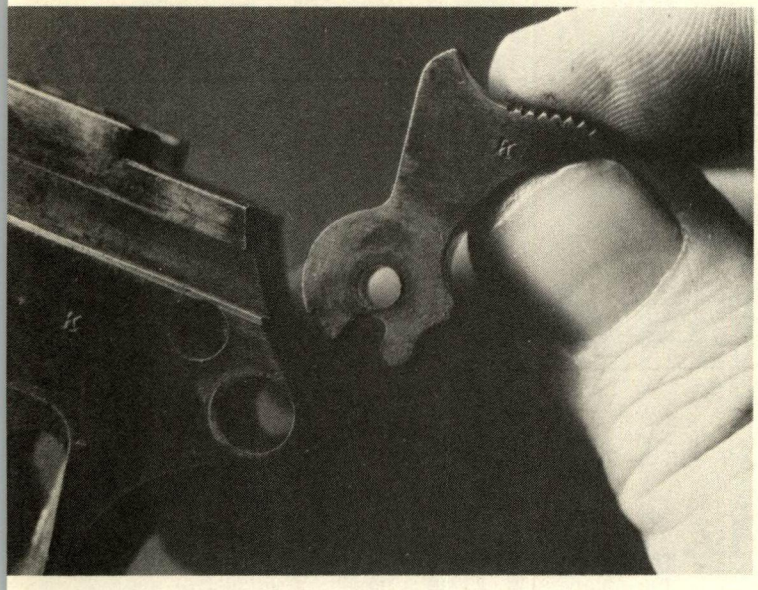
10. Remove the magazine follower and spring from the top of the frame.

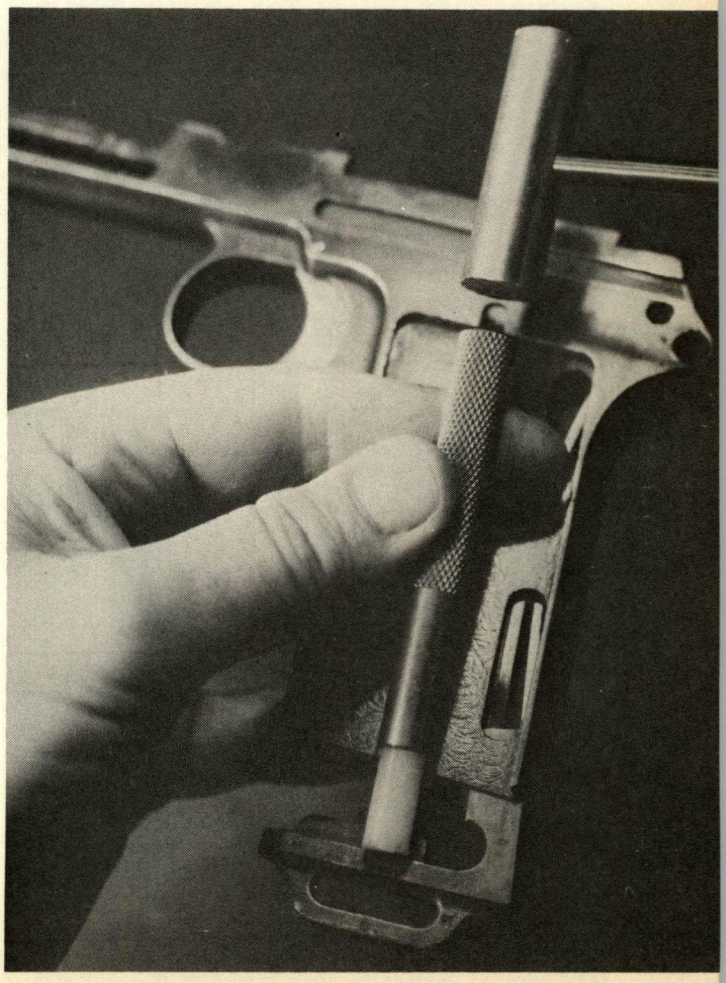
11. The cross-shaft of the safety-lever is split and tempered to hold the safety in place. The long slot in its right end is not a screw slot. Place a small screwdriver tip against the short slot in its concave face, and push the shaft toward the left.



12. Remove the safety-lever toward the left. Note that the hammer is at rest.



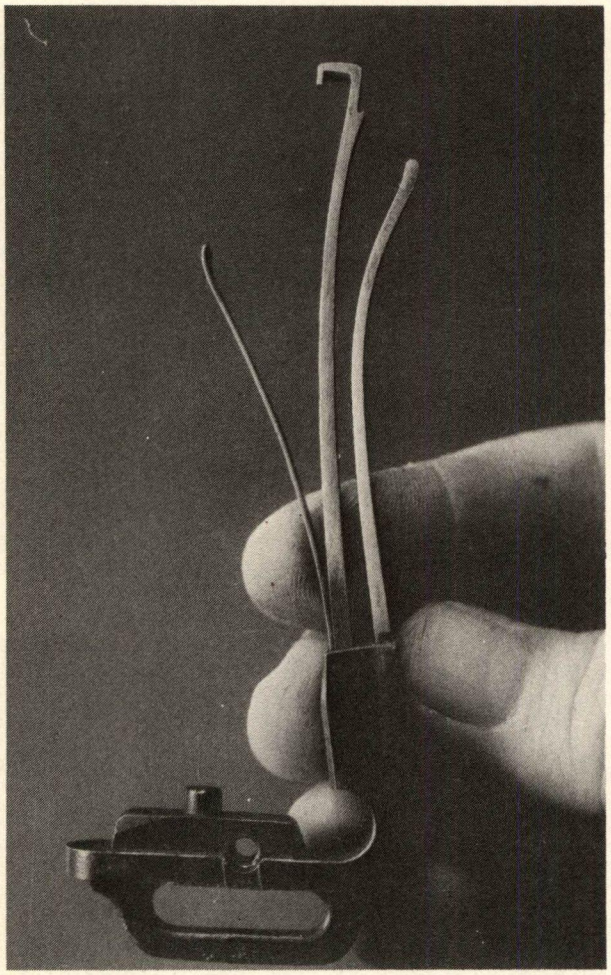




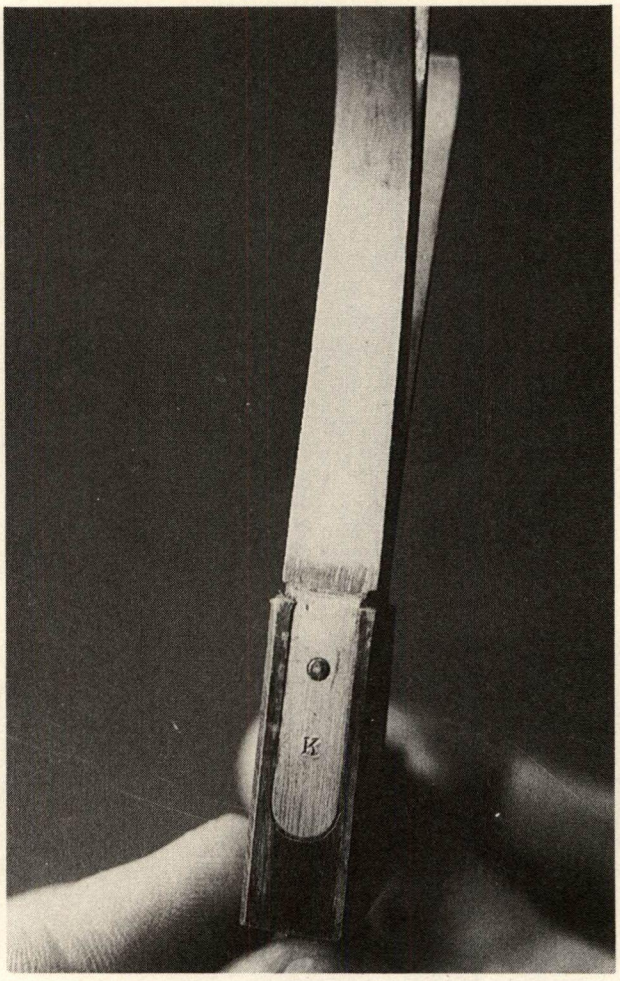
13. The hammer is retained by the large slotted cross-screw at the upper rear of the frame. Remove the cross-screw and lift out the hammer. There will be slight tension from the hammer spring, but not enough to cause any difficulty.

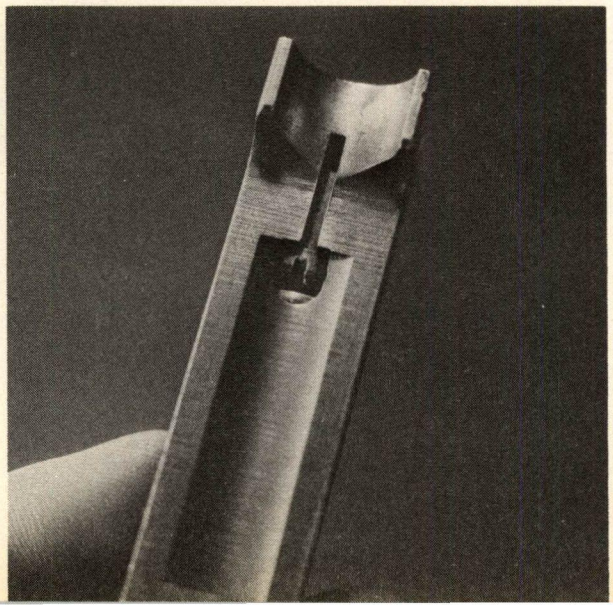
14. Remove the sub-frame by sliding it down and out of the grip frame. Tight fitting and the tension of the springs may make it necessary to help it along with a small hammer and nylon-tipped punch.

15. The sub-frame holds the hammer spring, the long, tempered sear, and the disconnector spring as a captive unit.



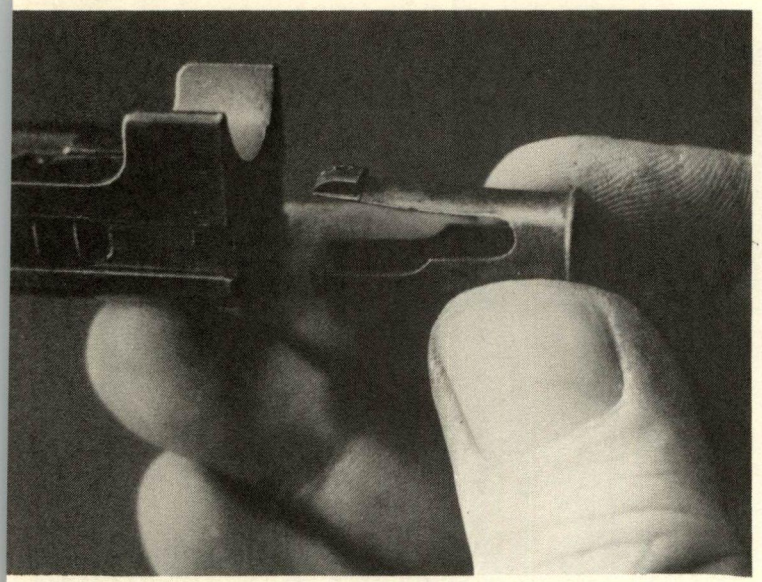
16. The three springs are dovetail mounted in the sub-frame. Before they can be removed, a small lock-pin must be drifted out.



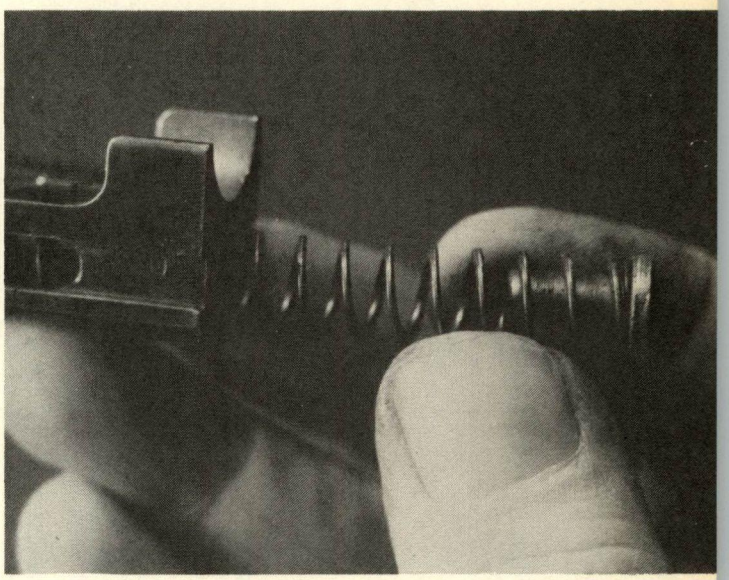


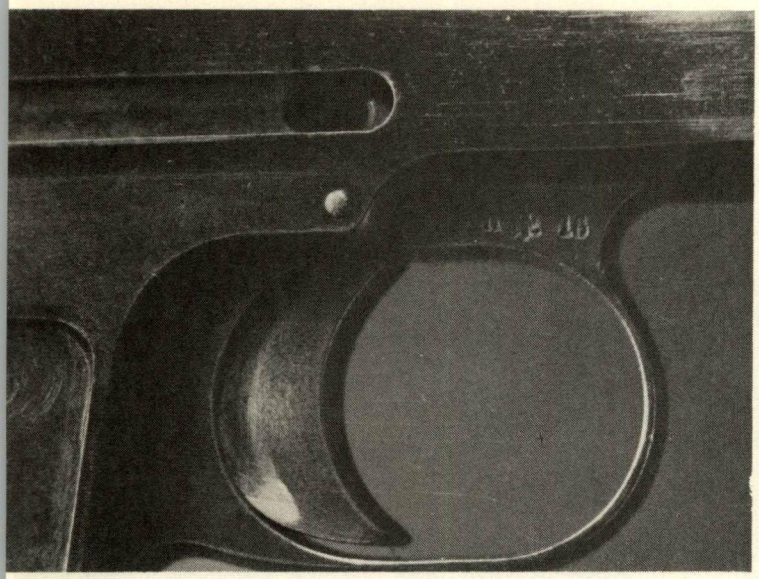
17. The recoil spring plug at the front of the frame is retained by a latch similar to the one which holds the safety-lever. Place a small screwdriver or a small diameter drift punch in the slot at the top rear of the plug, and depress the catch while moving it toward the front.

18. Remove the plug from the front of the frame.

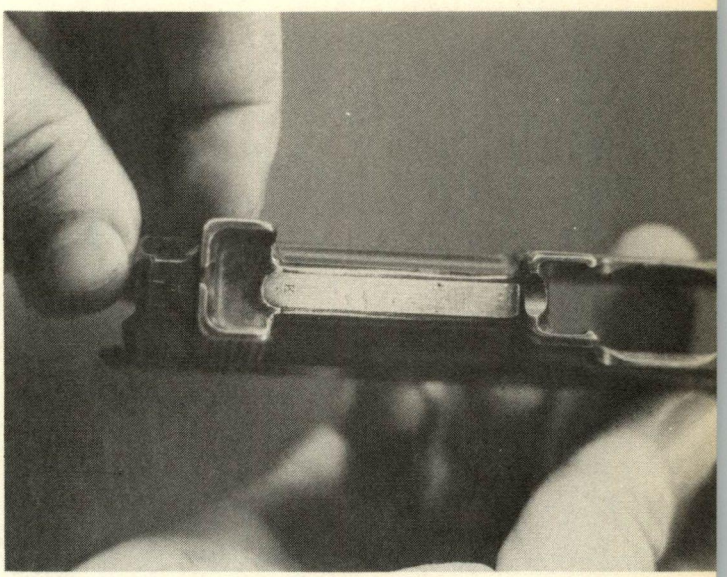


19. After the plug is removed, the recoil spring and its plunger can be taken out toward the front.



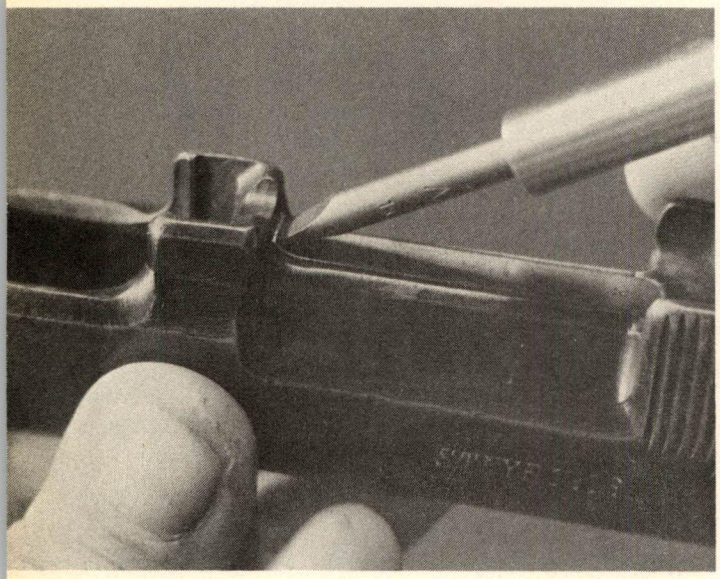


20. The trigger is retained by a cross-pin. After the pin is drifted out, the trigger is removed down and forward, into the interior of the guard.

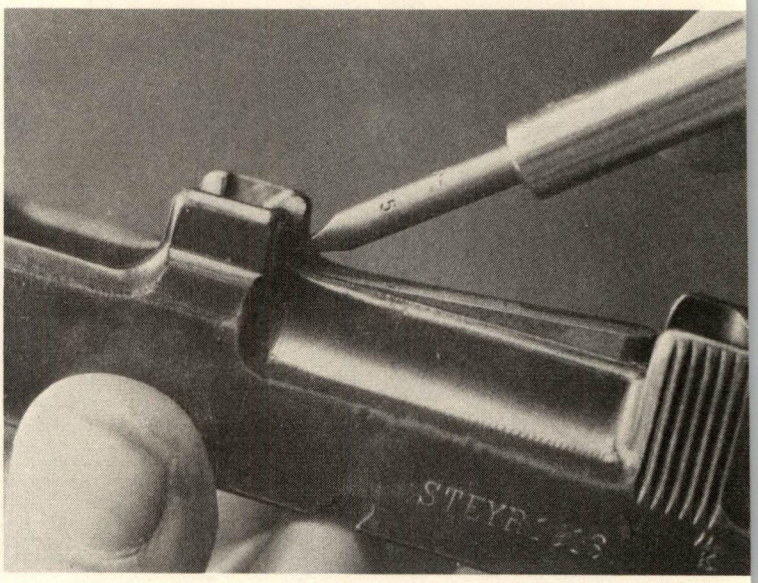


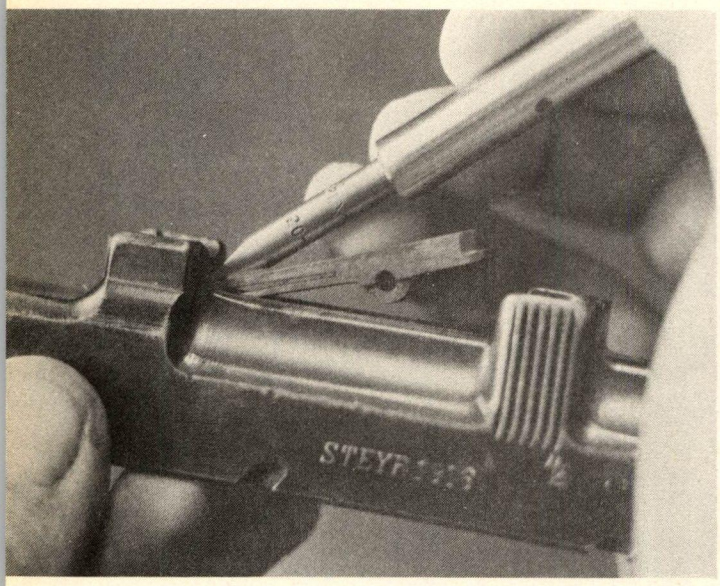
21. The extractor is mounted in a recess in the top of the slide, and a lower lobe of the extractor retains the firing pin and its spring. Removal of this system is not advisable unless absolutely necessary for repair. Extractors are broken more often in disassembly than in actual use.

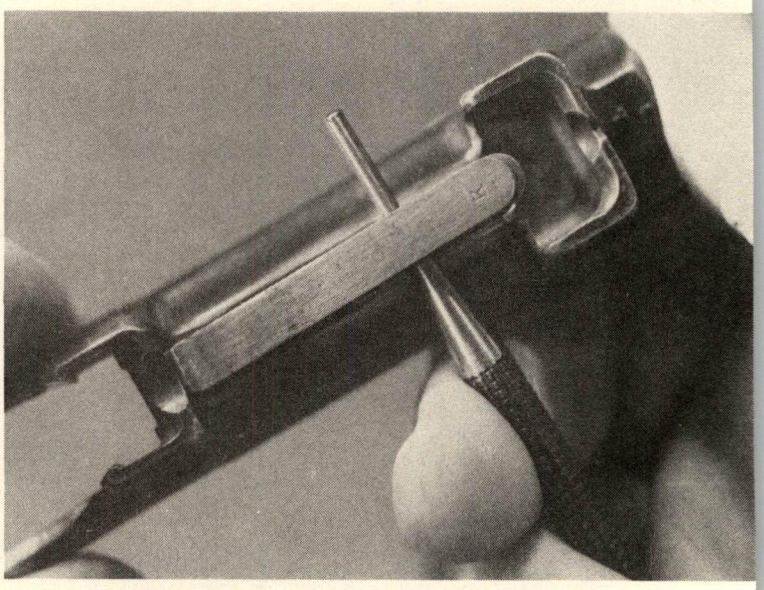
22. Place a tool of slightly narrower width than the part against the front upward curve of the extractor, and exert pressure down and forward. A light tap with a hammer on the tool handle may be necessary.



23. When the top plate of the extractor is depressed enough to clear its retaining shoulder, the extractor will move forward and its rear portion will rise from its recess in the slide. If only firing pin removal is desired, this can be done now without actually taking out the extractor.



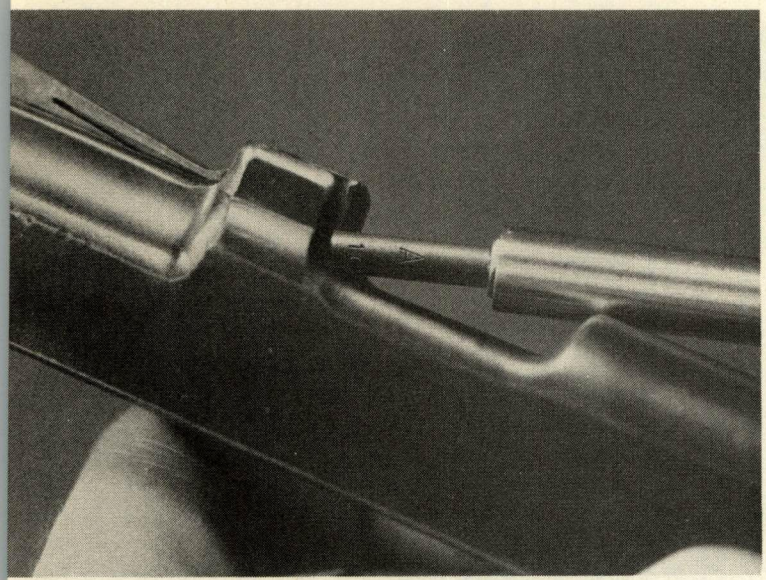




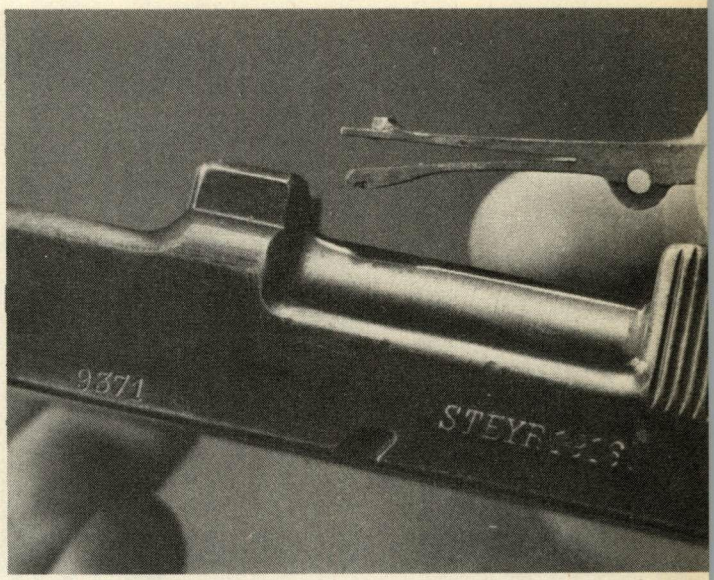
24. Continue pressure on the extractor plate until the rear portion of the extractor is clear of its recess in the slide.

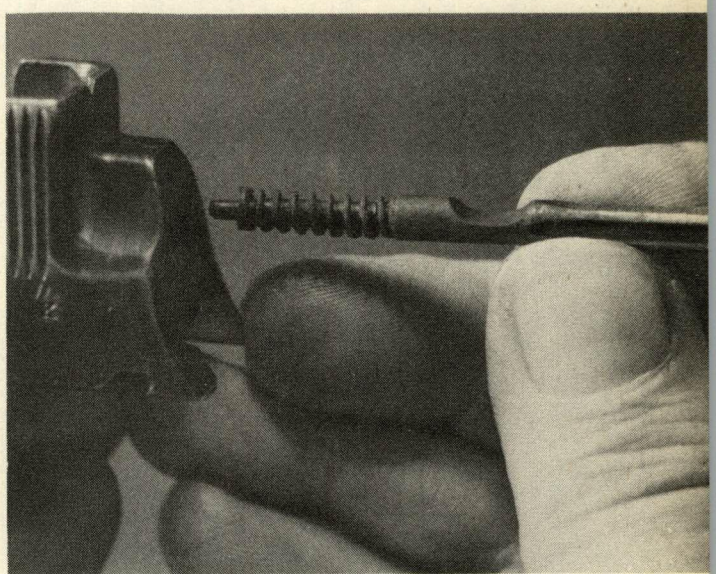
25. Insert a tool through the hole in the extractor lobe and pull the extractor up and toward the rear until the extractor beak catches on the top of the breech face. Don't try to force it farther to the rear or the beak will be broken.

26. Insert a screwdriver from the front, through the ejection port, and lift the extractor beak to free it from the top of the breech face, levering it upward and toward the rear.



27. Remove the extractor upward and toward the rear.

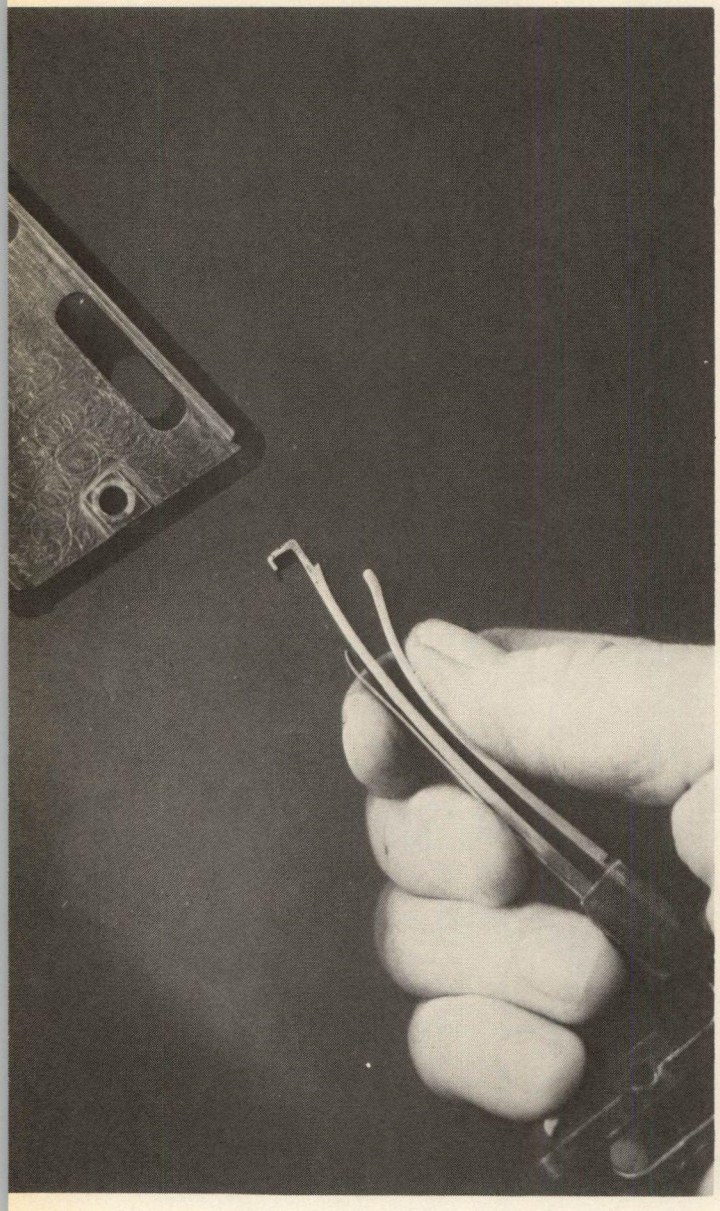




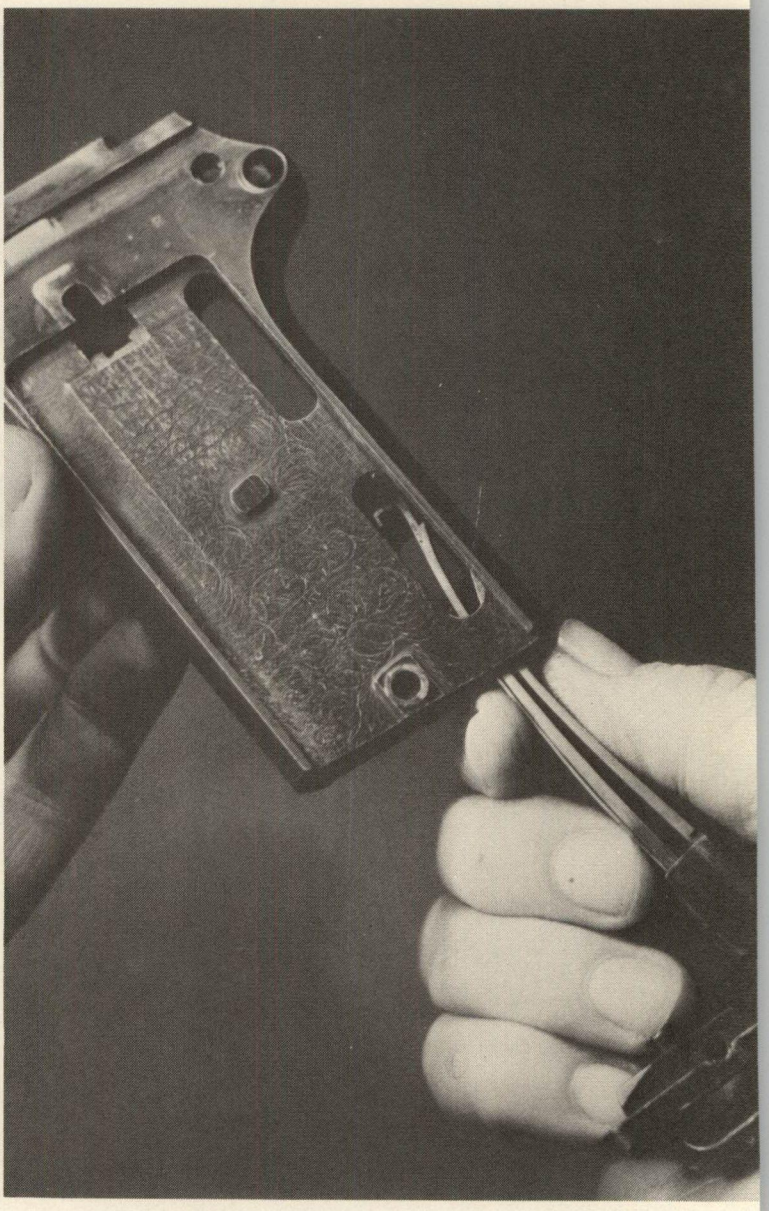
28. Remove the firing pin and its spring from the rear of the slide.

Reassembly Tips:

1. When replacing the sub-frame, compress the springs before insertion into the grip frame.

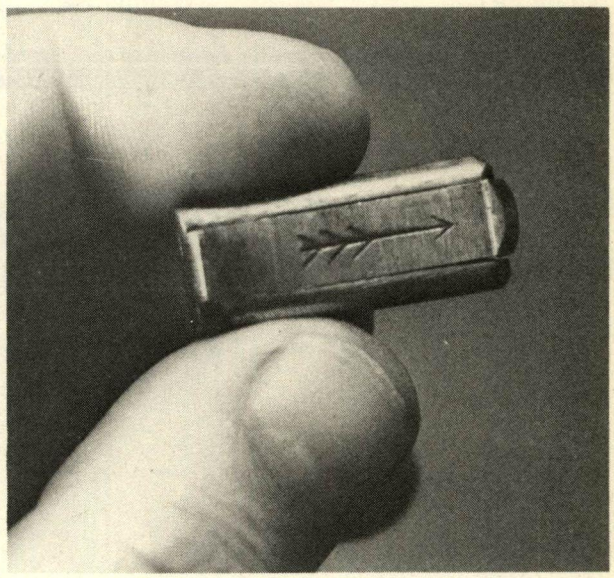


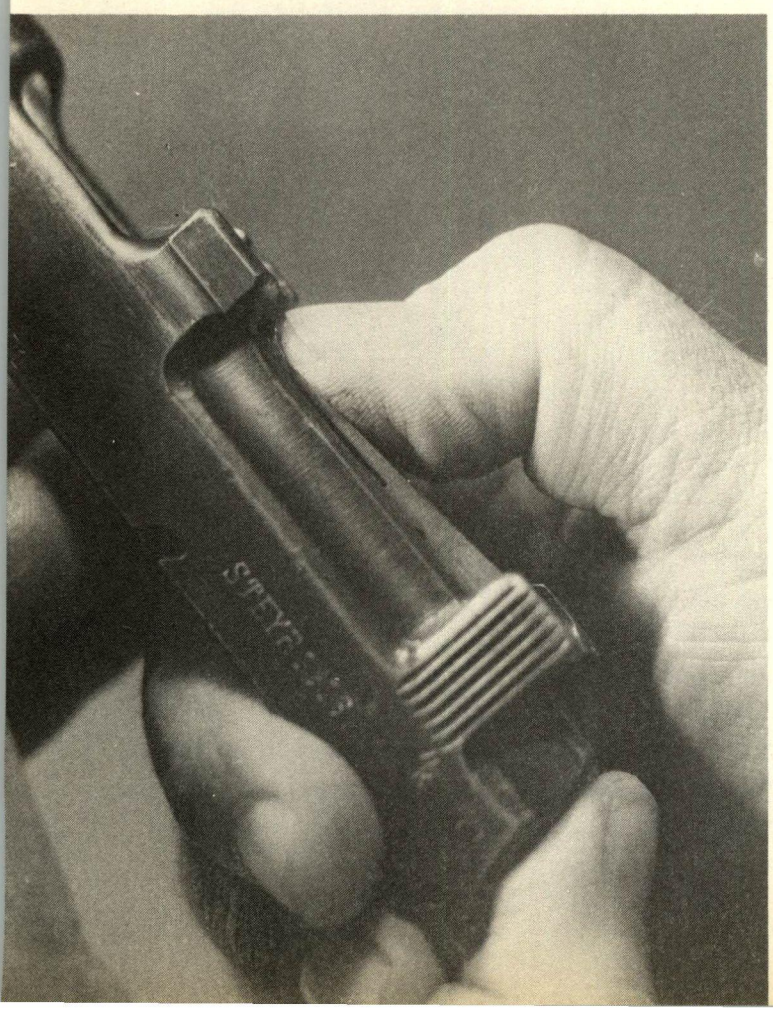
2. Be sure that all three springs enter the tunnel at the rear of the grip frame before sliding the sub-frame into place.



3. Before replacing the slide, be sure the barrel is in the position shown, with the rotation lugs resting on the right side of the frame.

4. When replacing the takedown-latch bar, the arrow should be on the underside, and insertion should be toward the left side. In other words, from right to left.





5. When replacing the firing pin and extractor, hold the firing pin in place while pushing the extractor down and forward. Final seating of the extractor may require a light tap with a nylon or plastic hammer. Remember that the extractor must move forward beneath its shoulder at the front, then toward the rear to engage in its rear flange.

Walther P-38

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Walther P-38 also apply to the following guns.

Walther P1 **Walther P4** **Walther P-38K**

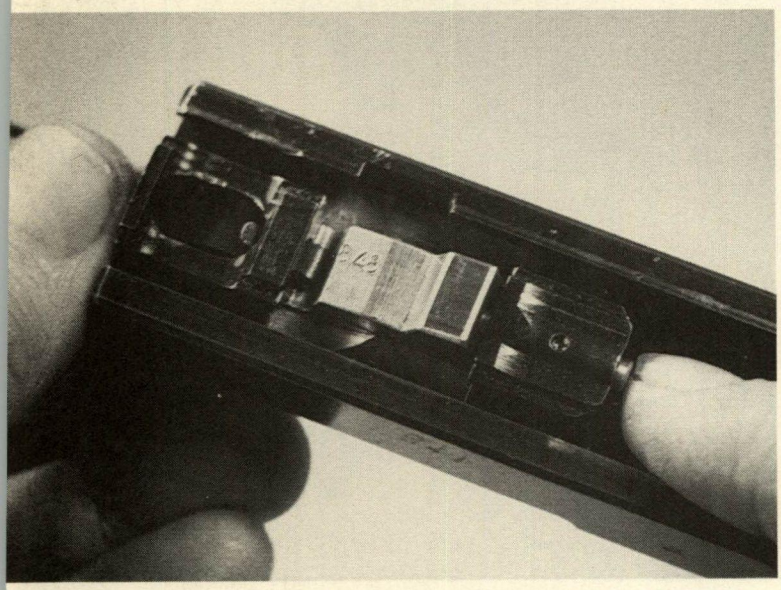
Data:	Walther P-38
Origin:	Germany
Manufacturer:	Carl Walther Waffenfabrik, Zella-Mehlis, and other wartime manufacturers
Cartridge:	9mm Luger (Parabellum)
Magazine capacity:	8 rounds
Overall length:	$8^{7}/_{16}$ inches
Height:	$5^{3}/_{8}$ inches
Barrel length:	$4^{9}/_{10}$ inches
Weight:	34 ounces

Adopted in 1938 as military standard to replace the Luger, the P-38 was made from that year through the end of World War II. In 1957, the relocated Walther factory at Ulm/Donau resumed production of the pistol for commercial sale and for use by the West German forces. The postwar pistols have slight design differences from the earlier guns, and not all parts will interchange. The instructions here apply to the standard prewar and wartime version.

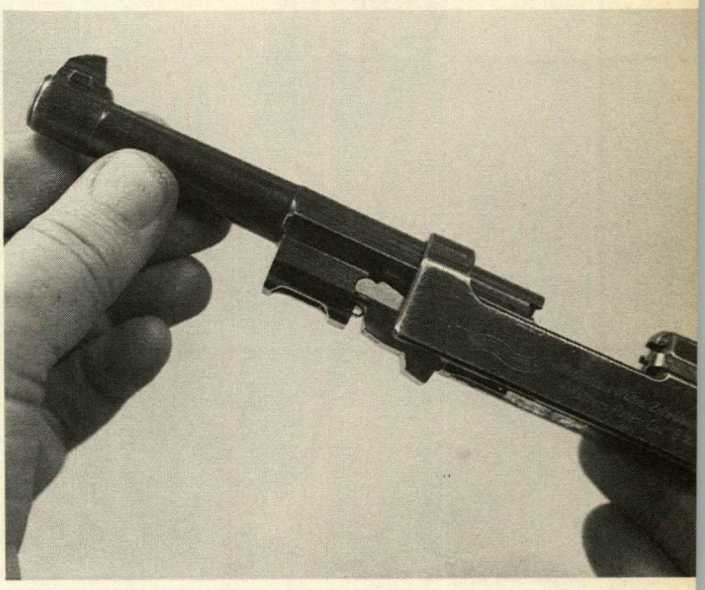
Field Strip:

1. Pull back the slide until it locks open and remove the magazine. The takedown-latch is at the front of the frame on the left side. Turn it down and forward until it stops.

2. Holding the slide against the tension of the recoil springs, release the slide-latch and allow the slide to move forward until its back edge is even with the top of the frame, in normal closed position. Pull the trigger and ease the hammer down, then run the slide and barrel assembly forward off the frame.



3. Push in the plunger at the rear of the barrel underlug to tip the locking block out of its recesses.

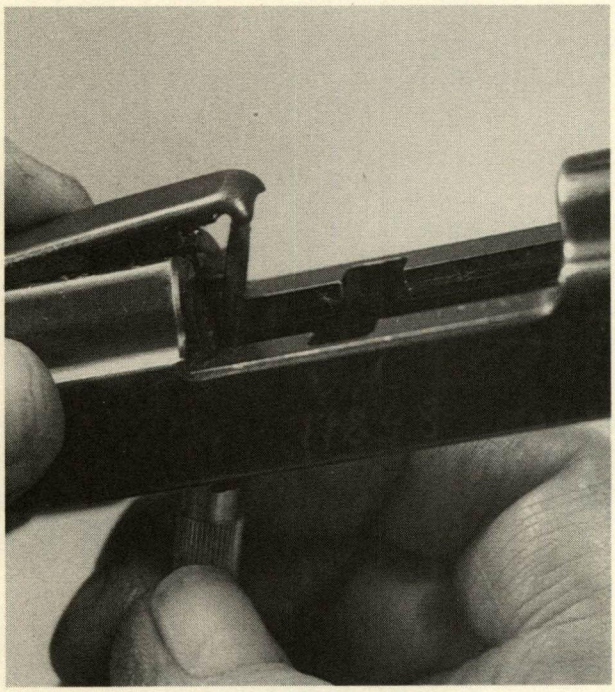


4. Slide the barrel forward out of the slide. **Gun is now field-stripped.**

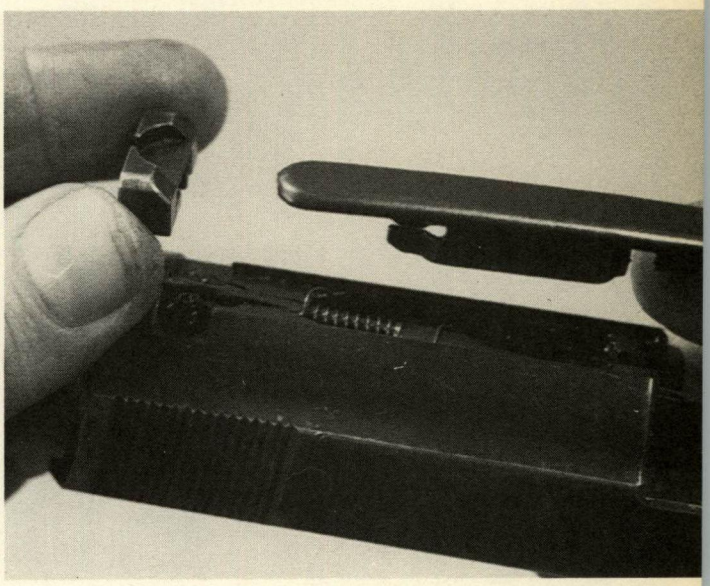
Walther P-38 field-stripped

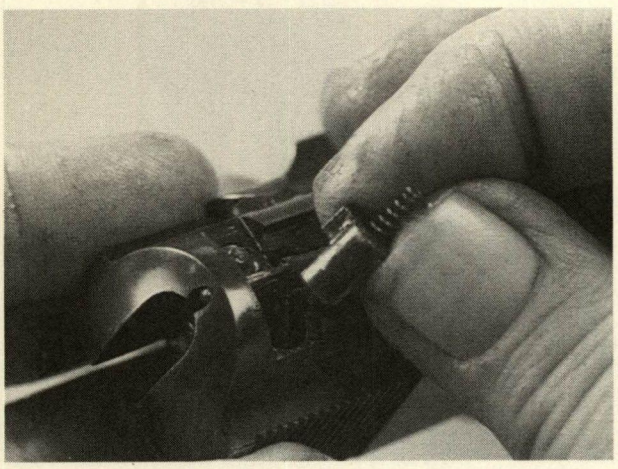
Detail Strip:

5. With a screwdriver of appropriate size, force the slide top cover up and lever it forward.

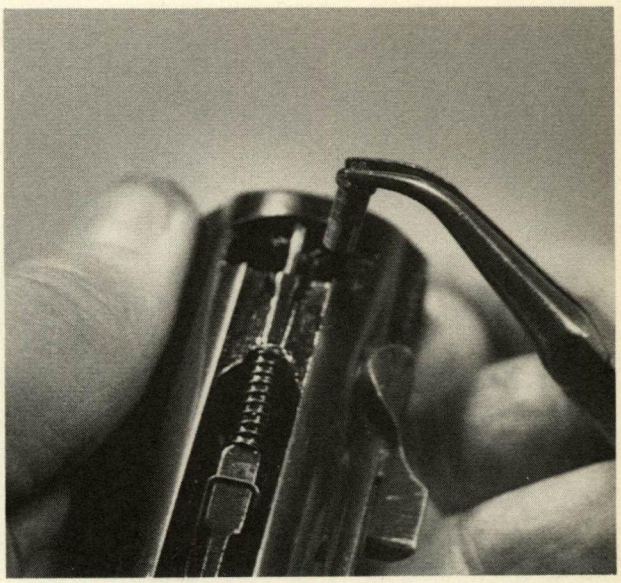


6. Remove the slide top cover. This will also release the rear sight for removal.



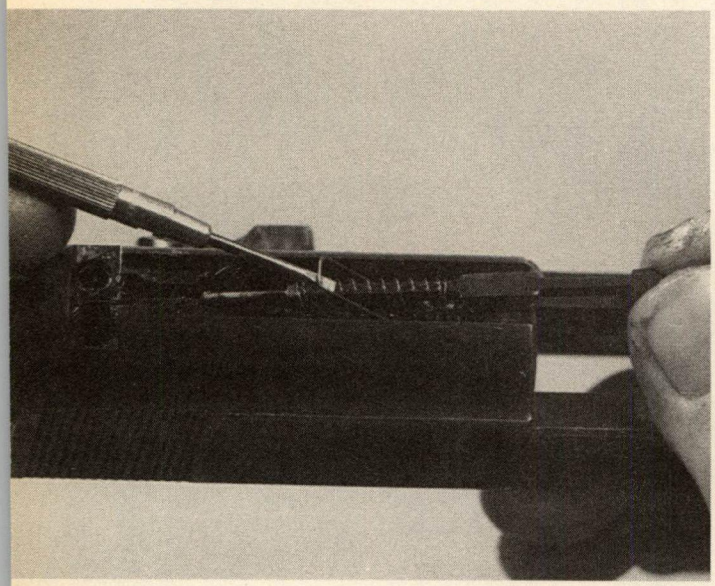


7. Remove the firing pin lock and its spring from the top of the slide.

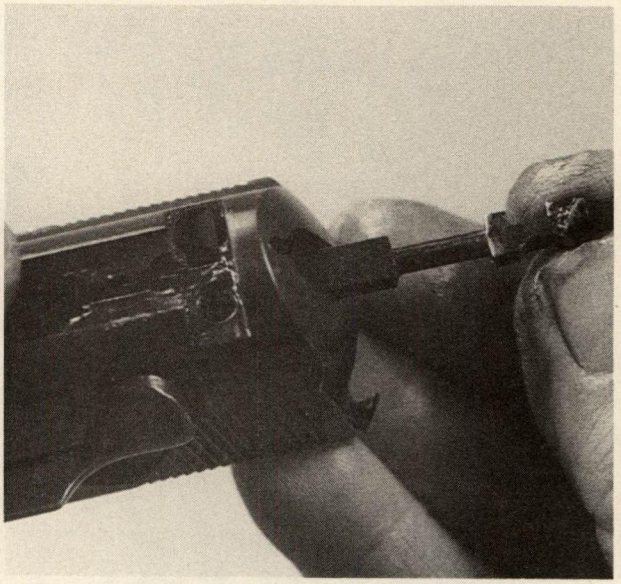


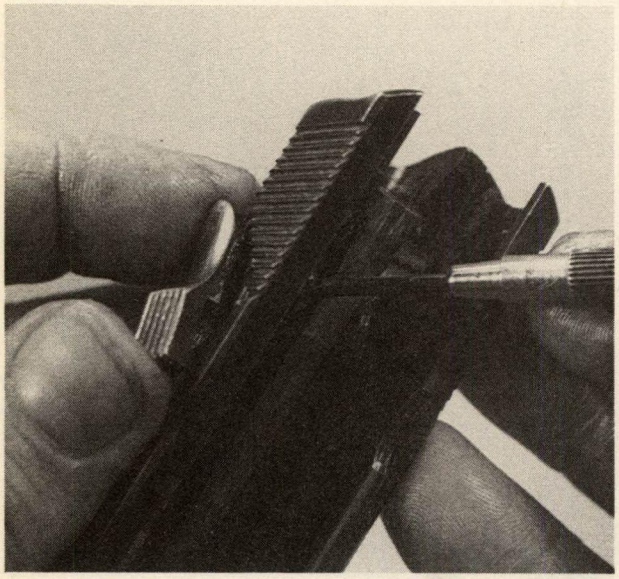
8. With pliers or forceps, remove the firing pin retainer from the top of the slide.

9. Use a small tool to lift the upper yoke of the firing pin spring, and remove the cartridge indicator and its spring up and forward.

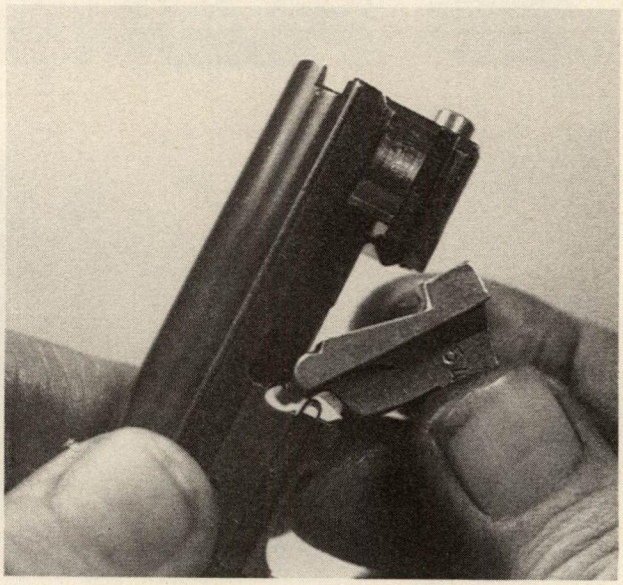


10. Remove the firing pin from the rear of the slide. **Note:** Safety must be in the off-safe position. The firing pin spring can now be lifted out of the recess in the top of the slide.



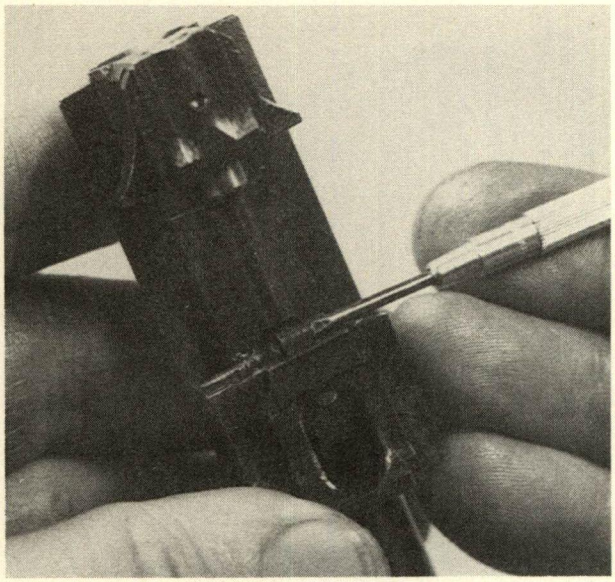


11. With the safety-lever set between its two positions use a small screwdriver to nudge it toward the left for removal. With the safety out, tension is relieved on the combination spring which powers the safety and extractor, and the extractor can be removed from the left side of the slide. The spring and its two plungers can then be removed forward from the extractor recess.

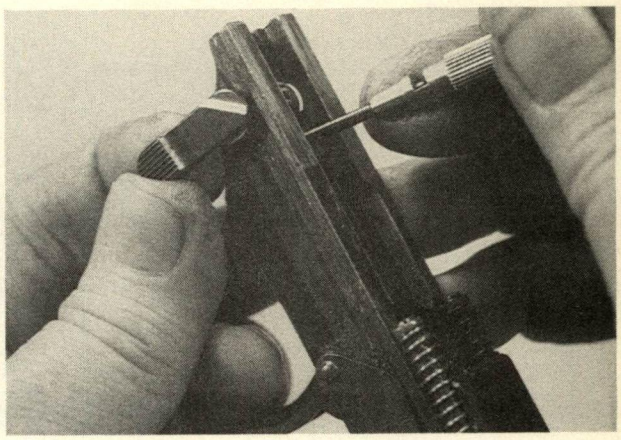


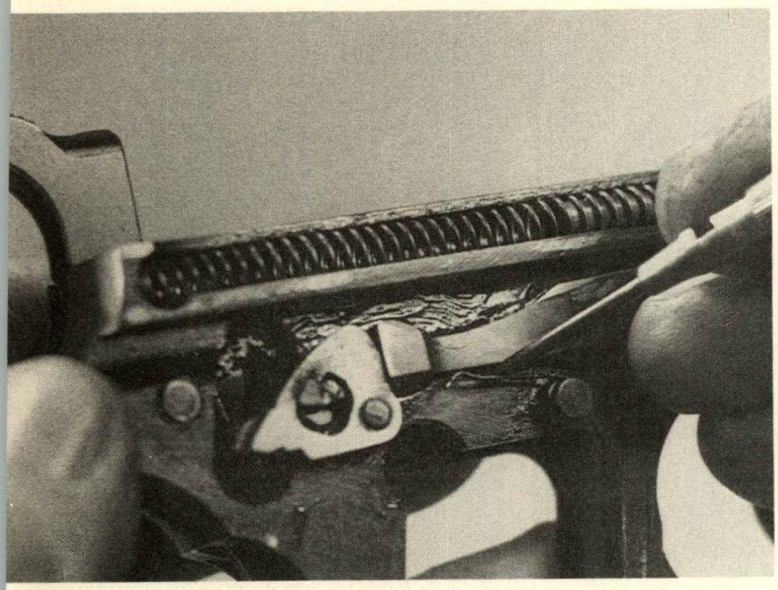
12. Turn the locking block out beyond its normal unlocked position, and remove it from the barrel.

13. The locking block spring can be removed by inserting a small tool through its loop and levering it toward the rear. The locking block plunger is staked in its tunnel at the rear of the barrel. It can be driven out toward the rear, but routine removal is not advisable.

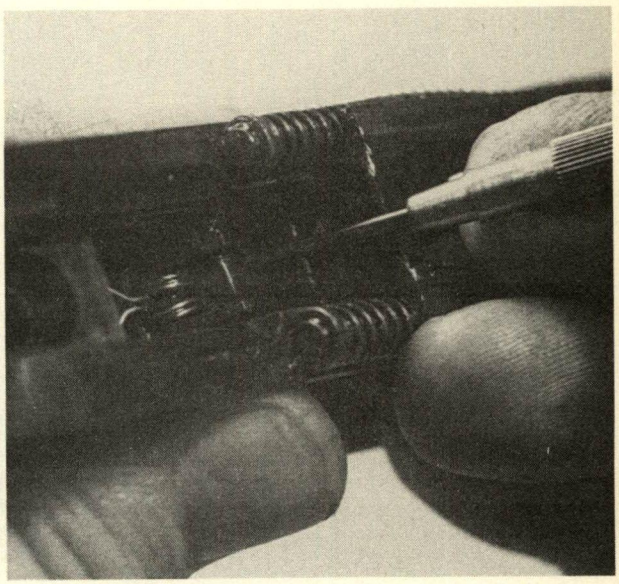


14. To remove the takedown-latch, turn it straight down and move it toward the left and out of the frame. **Caution:** *The takedown-latch plunger and spring may be released as they clear the right end of the latch cross-shaft, and the little spring is quite strong.* The plunger is usually staked in place at the top, inside the frame, and there is an access hole which allows the plunger to be depressed or detained with a small screwdriver. If the spring is particularly strong, it is advisable to use this method, holding the plunger down while removing the latch. After the latch is out, the access hole will allow the plunger to be drifted out forward, but routine removal is not advisable.





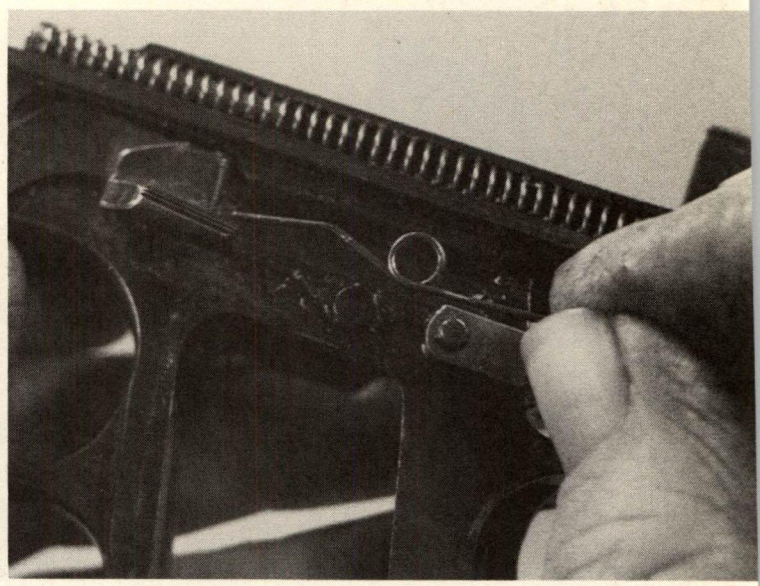
15. Detach the rear arm of the trigger bar spring from its groove in the bottom of the bar and remove the spring from its stud on the frame.

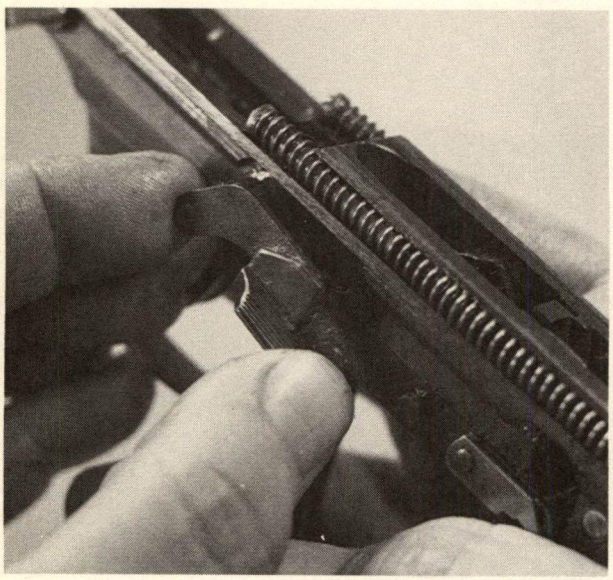


16. With a small screwdriver, lift the rear loop of the trigger spring from its engagement with the trigger bar pivot, and move the forward part of the trigger bar out toward the right.

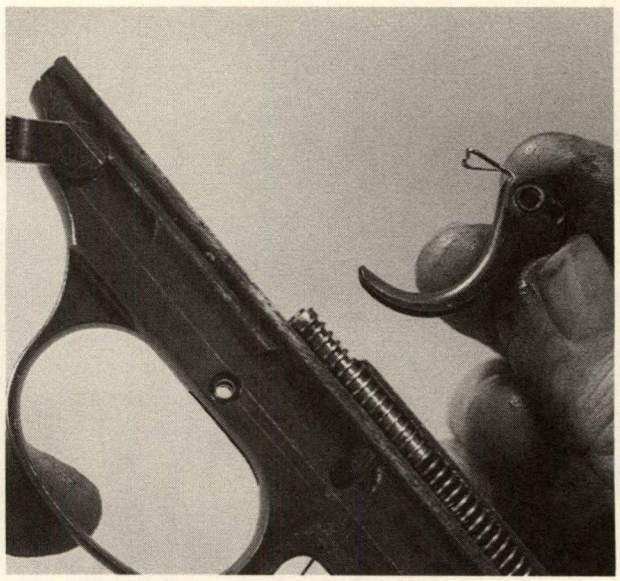
17. Disengage the rear hook of the trigger bar from the right wing of the sear, and remove the bar from the frame.

18. Lift the rear arm of the sear/slide-latch spring from its groove in the top of the sear, and move the spring off its stud on the frame. Then take it off toward the rear, pulling its forward arm from the hole in the slide latch.



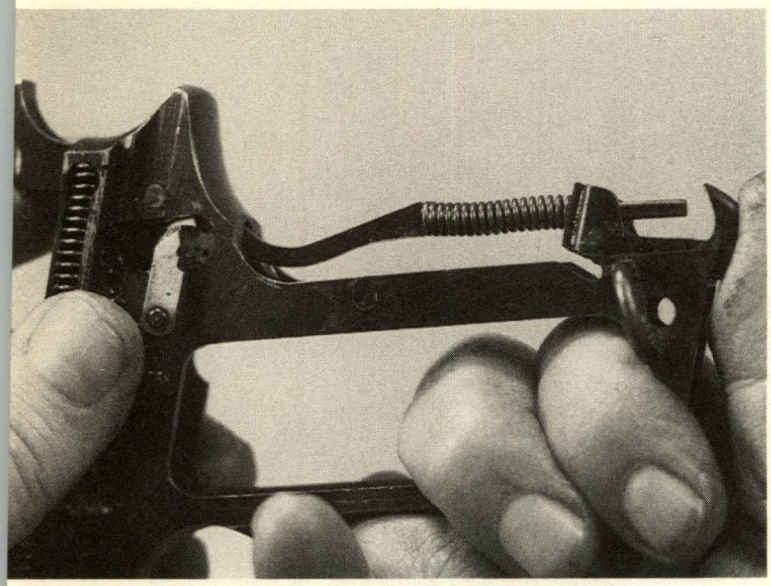


19. Move the slide-latch to the left and remove it from the frame.

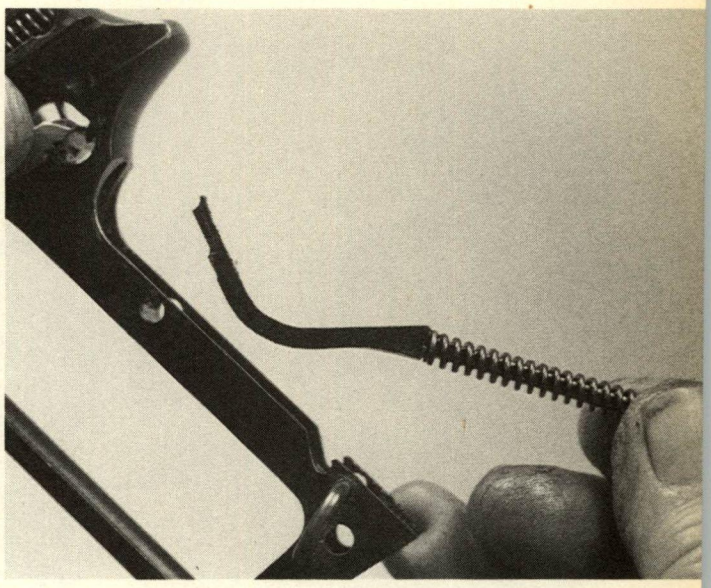


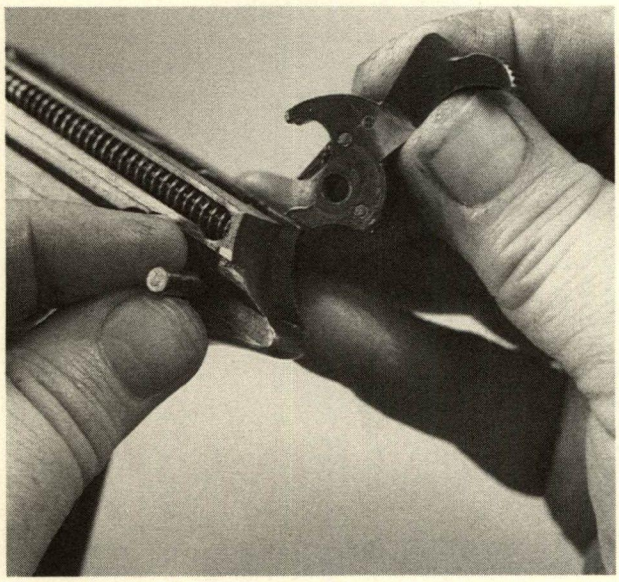
20. Removal of the slide-latch will free the trigger, trigger spring, and spring bushing for removal from the top of the frame. Pushing out the bushing will free the trigger spring.

21. With the hammer at rest (in the fired position) push up on the magazine catch to move its cross-pin out of the retaining recesses in the backstrap, and ease the catch off downward. **Caution:** *Even with the hammer at rest, the hammer spring is under tension. Be careful!*

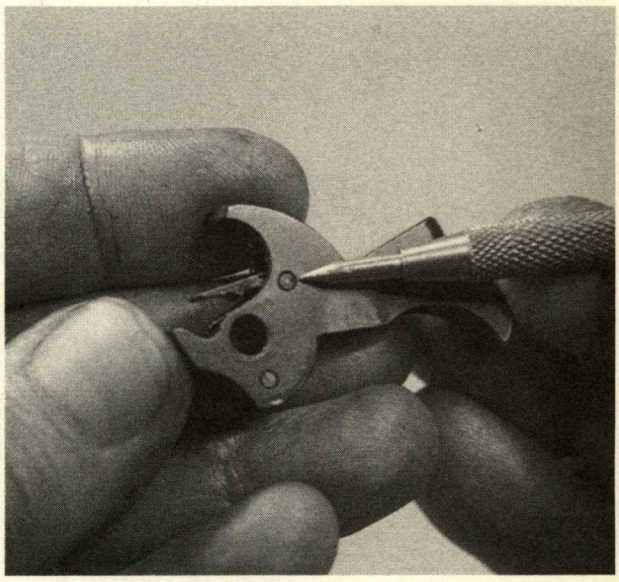


22. Removal of the magazine catch will free the hammer spring and hammer strut for removal downward.



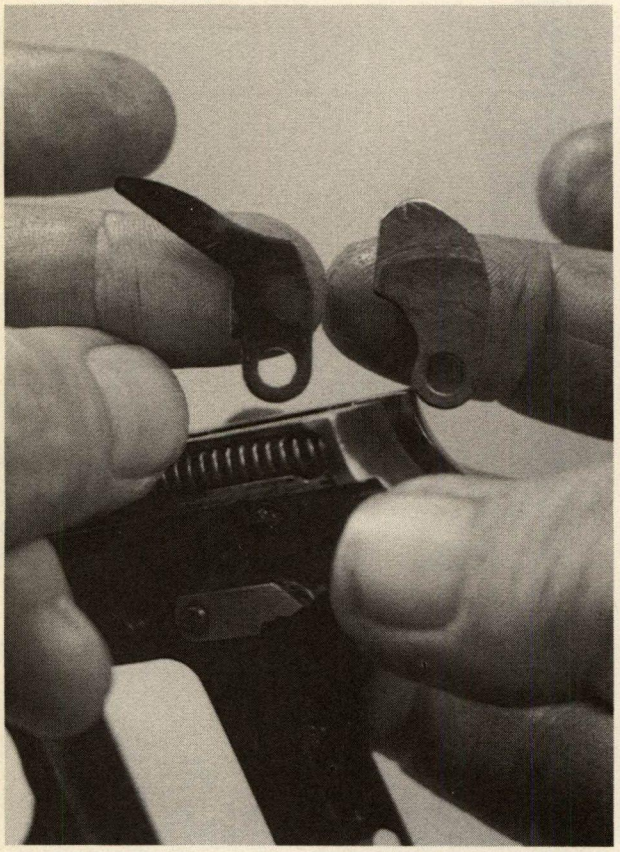


23. Push out the hammer pivot and remove the hammer from the top rear of the frame.

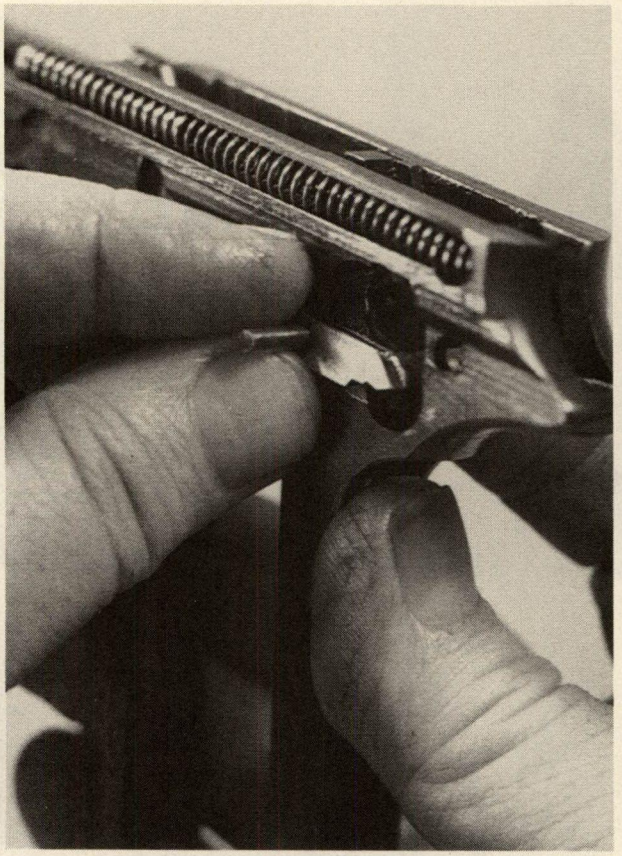


24. Drifting out the cross-pin at the front of the hammer will release the double-action lever and its spring for removal. Pin at the rear is the bearing point for the top of the strut, and need not be removed.

25. When the hammer is removed, the firing pin lock lever and hammer-drop lever will be released for removal from the top of the frame. They are located on each side of the hammer as shown—the hammer-drop on the left, the firing pin lock on the right.

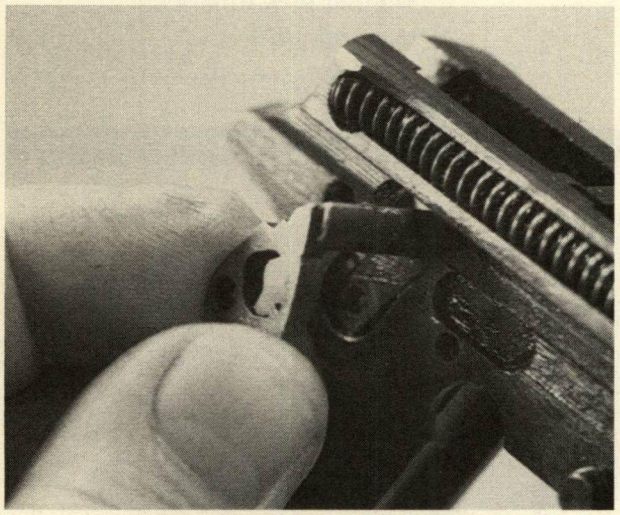


26. Push out the sear pivot pin and remove it from the frame.



27. The ejector is released by removal of the sear pivot pin, and is removed from the top of the frame.

28. Rotate the sear to align its left arm with the vertical oblong opening in the frame, and move the sear out toward the right side of the frame.



29. Use a small screwdriver to depress each of the two recoil springs, inserting the screwdriver tip a few coils back from the front, until the spring plungers can be tipped and removed from the side channels in the frame. **Caution:** *Keep the frame pointed away from your face during this operation in case the springs get away.* After removal of the plungers, ease the springs out forward.

Reassembly Tips:

The slide top cover can usually be pressed back into place by hand. In some cases, it may be very tight and could require a light tap with a nylon hammer to seat it.

When replacing the safety-lever, use a small tool to depress the spring plunger and ease entry of the safety cross-piece.

When replacing the trigger bar, remember to lift the rear loop of the trigger spring and be sure that it engages the groove on the trigger bar pivot.

When replacing the slide on the frame, be sure the hammer is in the lowered position and the locking block on the barrel is in the fully-locked position to clear the edge of the frame. At the rear, be sure the ejector is tipped forward into the magazine well to clear the rear of the slide. When the slide is in normal position, even with the rear of the frame, insert the magazine and cock the hammer. Then draw back the slide to the open position and turn the takedown latch back toward the rear until it locks.

Walther PPK/s

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Walther PPK/S also apply to the following guns.

Walther PP
Walther PPK/s American
Turkish MKE
Walther PPK
Manurhin PP
Walther PPK American
Manurhin PPK/s

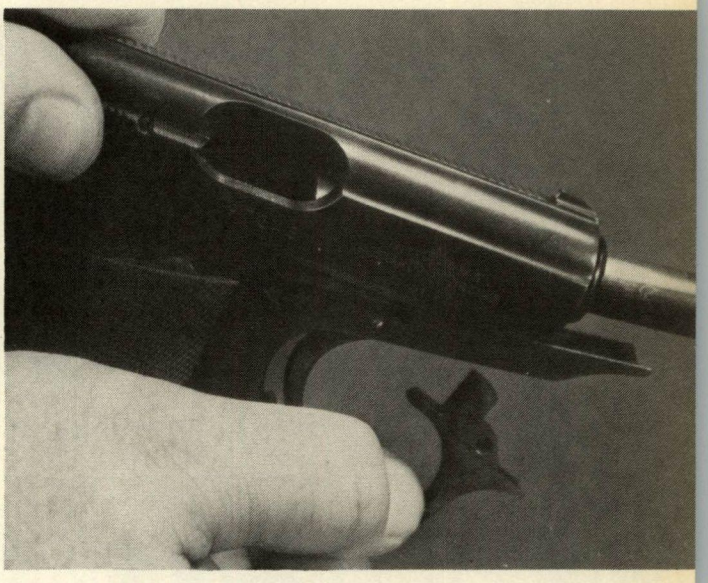
Data:	Walther Model PPK/s
Origin:	Germany
Manufacturer:	Carl Walther Waffenfabrik, Ulm/Donau, West Germany
Cartridges:	22 LR, 32 ACP, 380 ACP
Magazine capacity:	22—10 rounds, 32—8 rounds, 380—7 rounds
Overall length:	$6^{1}/_{8}$ inches
Height:	$4^{3}/_{4}$ inches
Barrel length:	$3^{5}/_{16}$ inches
Weight:	23 ounces

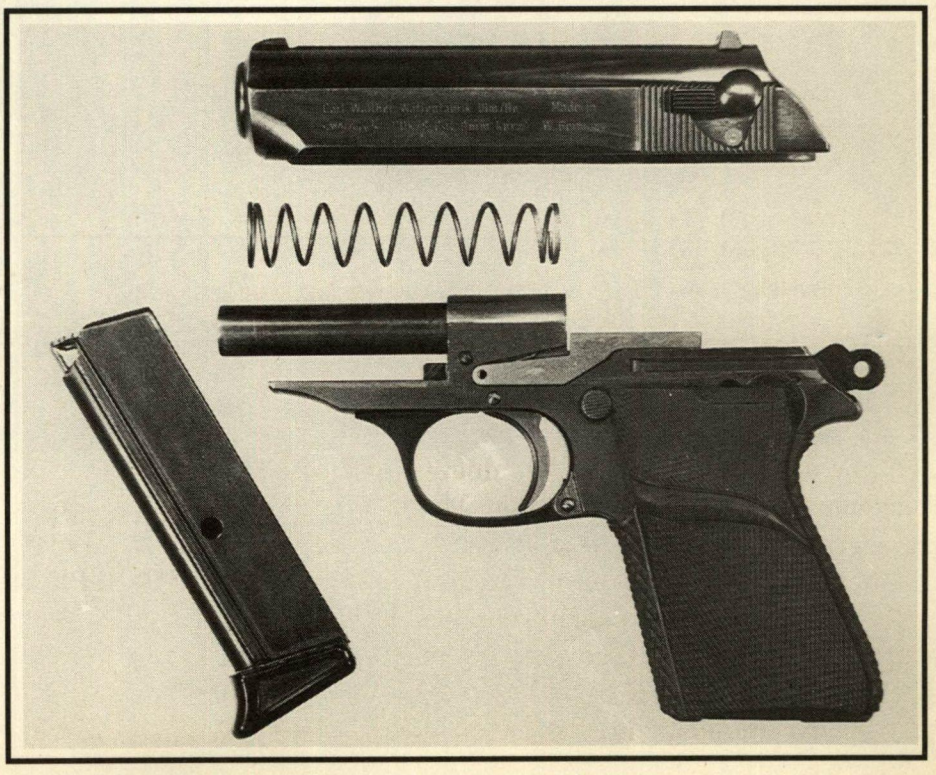
Of the two original Walther double-action medium-frame autos, the smaller Model PPK was easily the most popular. Its compact size, high quality, and absolute reliability made it a favorite with those who legally carry concealed arms. In 1968 the U.S. government prohibited importation of the PPK because it was $^{1}/_{10}$-inch below the minimum in vertical measurement under their rules. The Walther people were equal to the challenge—they simply mated a PP frame to a PPK slide and barrel, and the PPK/s was born. The PPK is now made in the U.S. by Interarms. For several years, Manurhin of France also made the Walther PP in 22 Long Rifle, 32 ACP, and 380 ACP. The instructions will apply to all of the pistols of this basic Walther pattern.

Field Strip:

1. With the magazine removed and the hammer cocked, pull down on the front of the trigger guard.

2. While holding the guard in the lowered position, draw the slide all the way back and lift it at the rear to clear the barrel. Then run the slide forward off the barrel and frame, and remove the recoil spring from the barrel. **Gun is now field-stripped.**

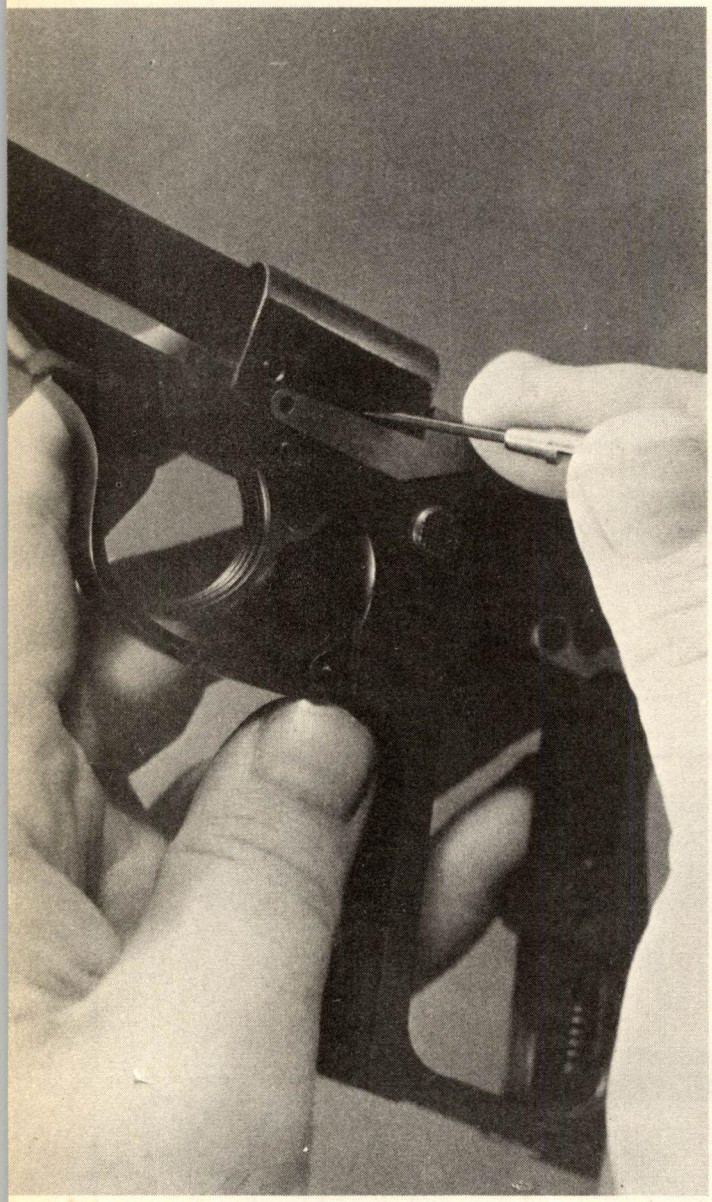




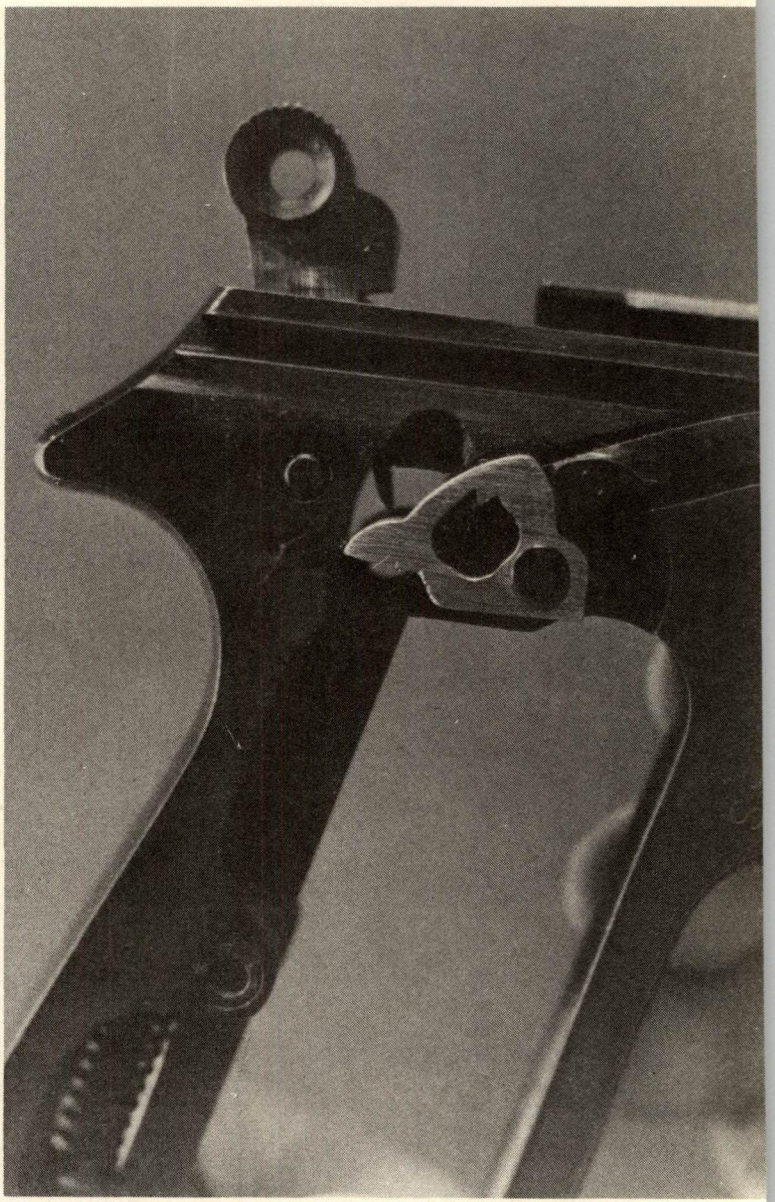
Walther PPK/s field-stripped

Detail Strip:

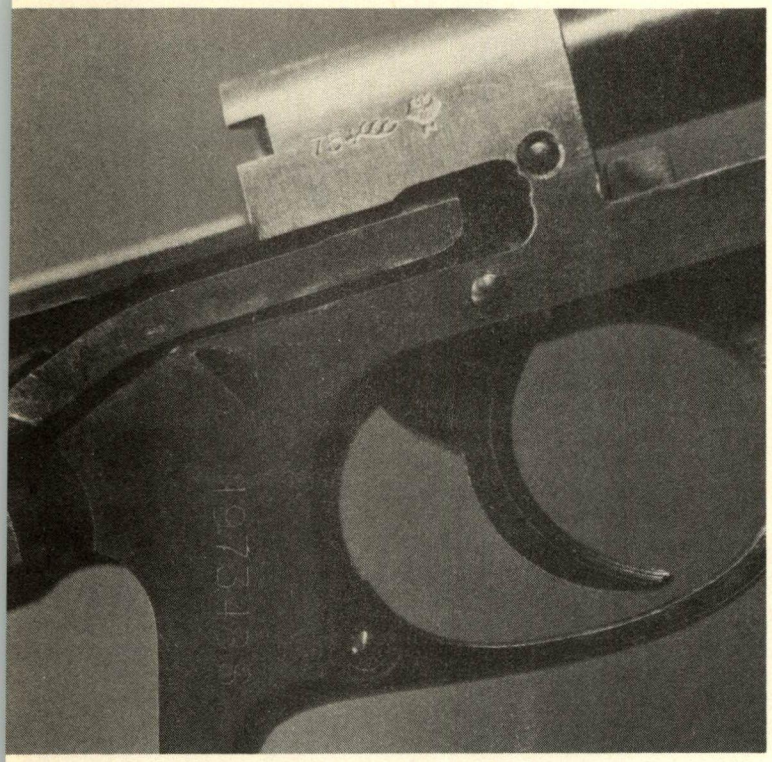
3. With the grips removed, use a small screwdriver to depress the ejector/hold-open spring and ease it out of its shelf on the frame. The ejector/hold-open unit can then be lifted off to the left.

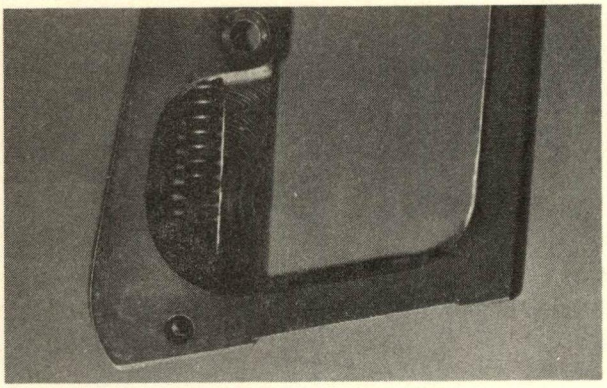


4. On early Walther pistols, the famous "horseshoe sear" is released by taking out the pivot studs, one on each side. On current production guns, the pivots are tightly press-fitted in place, and removal is not easy, nor is it recommended in normal takedown. Drifting out the large pin at the upper rear of the frame from right to left will release the hammer and hammer spring. The spring is under tension, so ease it out.



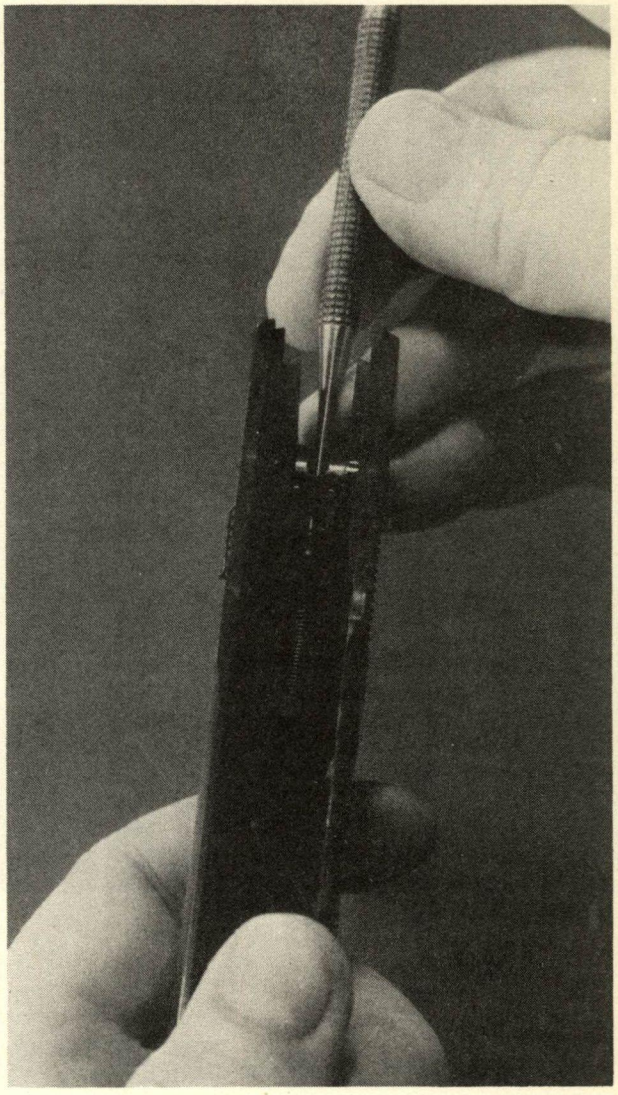
5. Drifting out the trigger pin will release the trigger, and also allow removal of the trigger spring and the trigger bar/disconnector. The latter part must be moved down and forward to clear its shelf on the frame, then is removed to the right. The upper pin retains the barrel, but these are tightly fitted at the factory, and removal is not recommended. Removal of the lower pin will release the trigger guard, its spring and plunger, and the magazine release and spring.



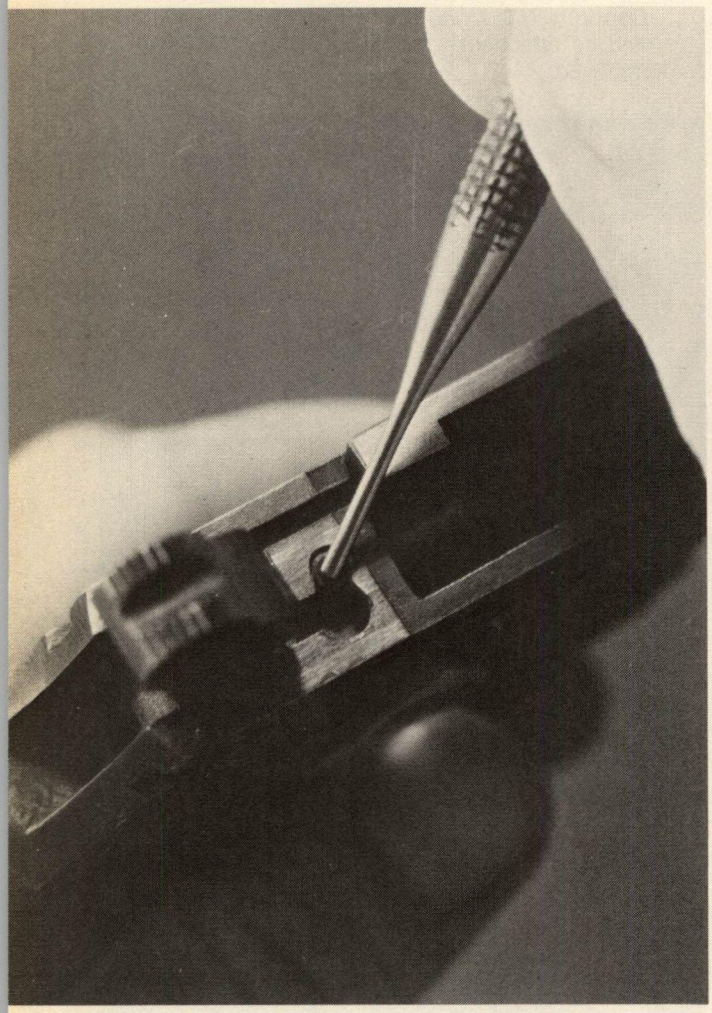


7. Removal of the pin at lower rear of the grip frame will release the frame plug, and is a way of relieving hammer spring tension. **Caution:** *If the hammer is still in place when the plug is removed, the spring will be under tension.* The hammer can be removed and replaced, though, without taking out this plug.

6. A small screwdriver can be used to push the firing pin forward, working against the exposed rectangular block on its underside, but I prefer the method shown in the photo, as it combines two operations. Use a small drift to depress the firing pin ahead of the safety, set the safety-lever between its two positions, and use the side of the drift to nudge the safety out toward the left side. This will release the firing pin and spring. **Caution:** *The spring is under tension.* The extractor and its attendant spring and plunger can now be removed.



8. To remove the hammer block, depress the spring lock, visible at the top of the frame and tip it to the right (with the hammer at rest, as shown), then remove the follower and spring. Cock the hammer, invert the gun, and shake out the hammer block.



Reassembly Tips:

When replacing the safety in the slide, use a small screwdriver against the rectangular block on the underside of the firing pin to depress the firing pin, and another small screwdriver to depress the plunger of the safety spring, inside the slide on the right side. A third hand will be helpful.

When replacing the trigger, spring, and the trigger bar, the arm of the trigger spring which powers the trigger bar must be engaged with the stud on the bar by working with a small tool through the opening for the ejector/hold-open on the left side. A third hand is also helpful here.

Note that the recoil spring is larger at one end than the other. The larger end goes toward the front of the slide.

The trigger pin, trigger guard pin, and frame plug pin are all of similar dimensions, but have different configurations and will not work interchangeably. Keep each with its part, and take care not to get them mixed.

Walther TPH

Data:	Walther TPH
Origin:	West Germany
Manufacturer:	Carl Walther Gmbh Ulm/Donau
Cartridge:	22 Long Rifle
Magazine capacity:	6 rounds
Overall length:	5 1/4 inches
Height:	3 1/2 inches
Barrel length:	2 3/4 inches
Weight:	11 1/2 ounces

The elegant little Walther TPH was unimportable because of its size, and for several years it was not available for sale to the public in the U.S. For some time now, a stainless steel version has been made in America by Interarms. The TPH does not have the same internal mechanism as the larger Walther pistols, and the takedown differs accordingly.

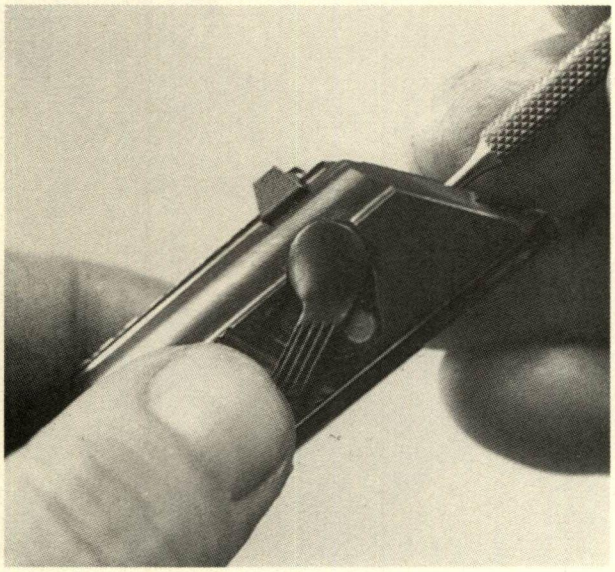
Field Strip:

1. With the magazine removed and the hammer cocked, pull the trigger guard downward until its front clears the frame, and hold it there. Draw back the slide until it stops, and lift the rear of the slide upward. Remove the slide toward the front. Turn the recoil spring clockwise (front view), while pulling it forward off the barrel. **Gun is now field-stripped.**

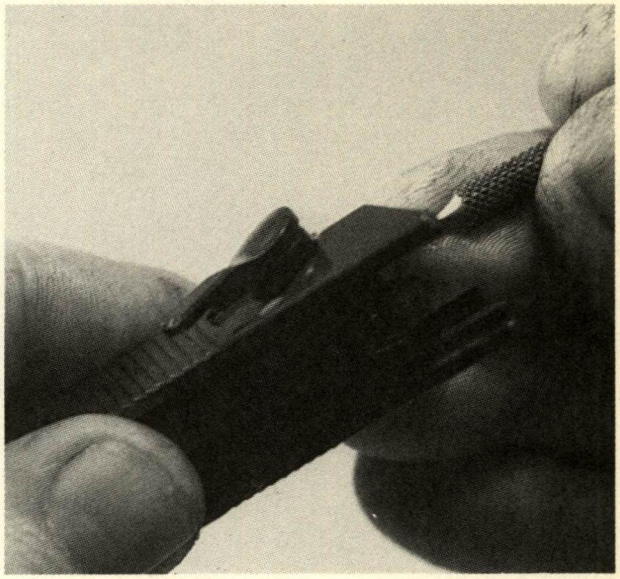
Walther TPH field-stripped

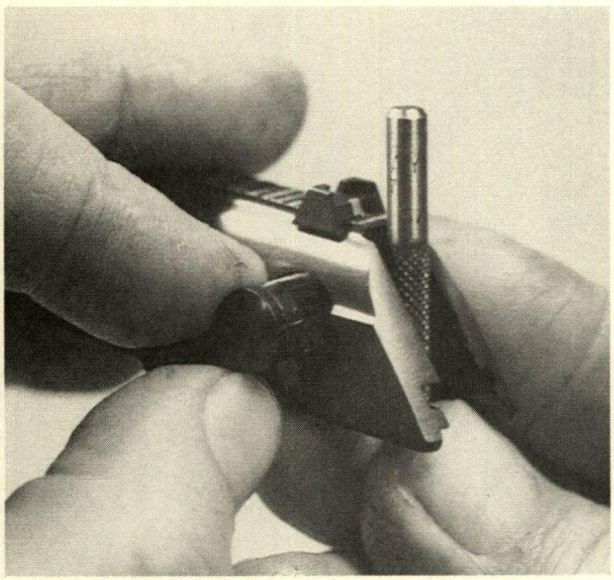
Detail Strip:

2. Use a tool to depress the firing pin until its head is forward of the safety cross-piece, and set the safety-lever between its two positions.

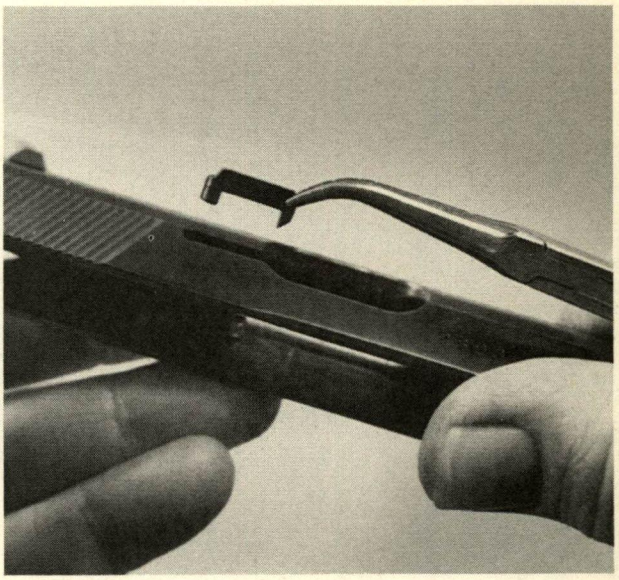


3. Use the tool to nudge the safety out toward the left. **Caution:** *The firing pin will be released as the safety clears, so control it.*



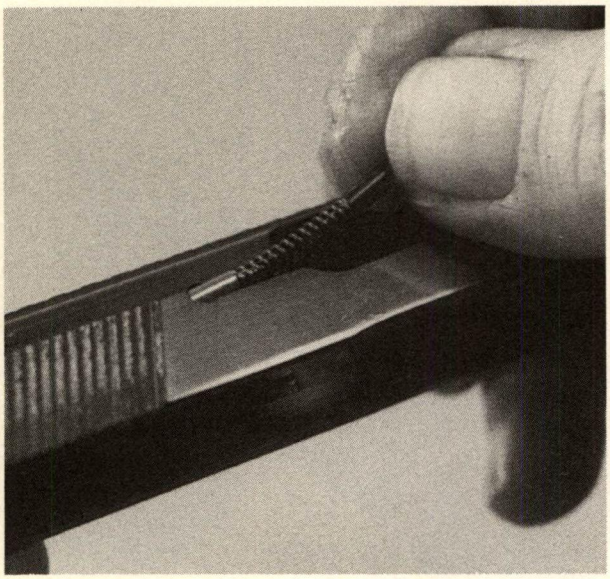


4. Remove the safety toward the left. Remove the firing pin and its spring toward the rear.

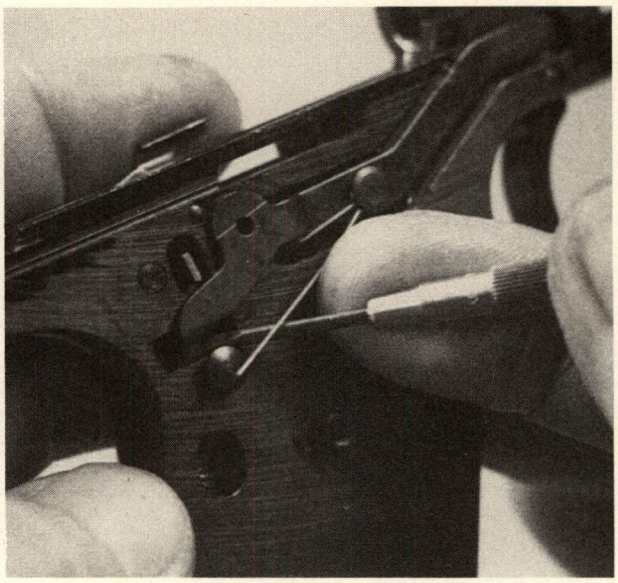


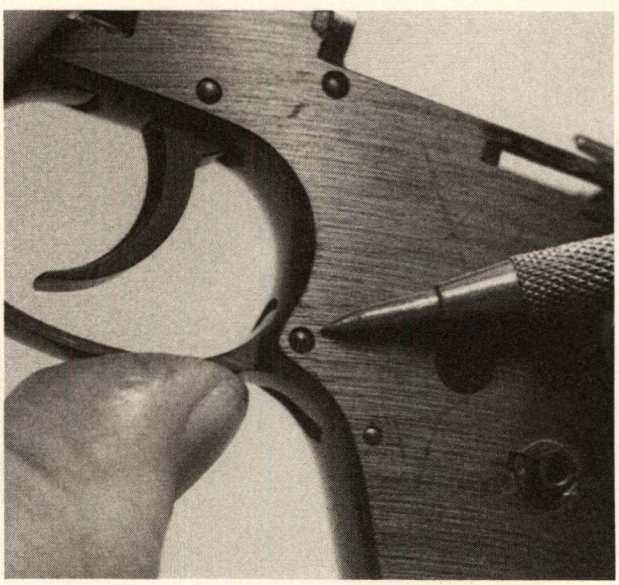
5. Removal of the safety will have relieved the tension of the combination safety and extractor spring, and the extractor can now be lifted out of its recess.

6. Use a tool at the rear to push the combination spring and its plungers forward, and remove these parts toward the front.



7. Remove the grips, and unhook the lower arm of the trigger bar spring from its stud on the frame. The spring is easily removed from its mounting stud, if necessary.

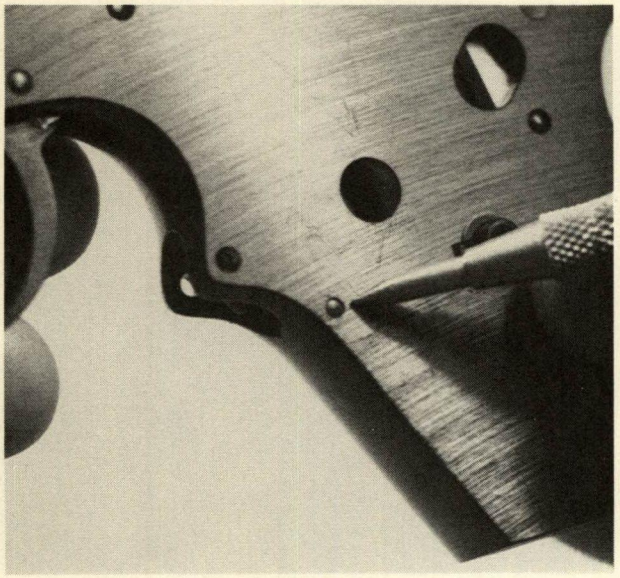




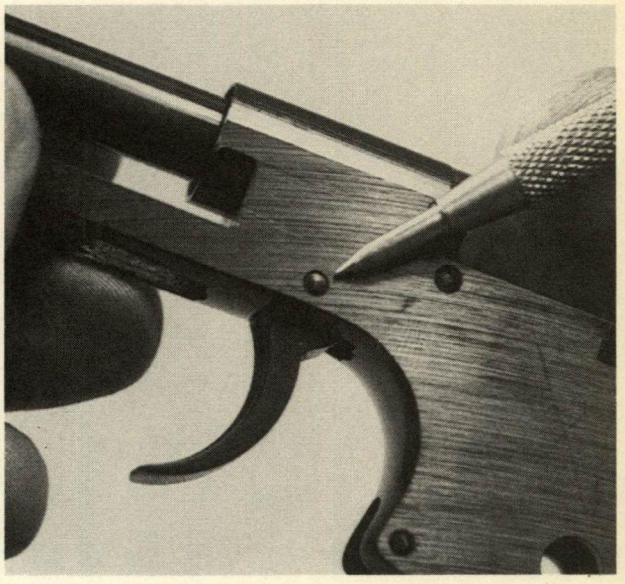
8. Pull the trigger slightly to the rear, and move the front of the trigger bar toward the right, disengaging its pivot from the trigger. Move the front of the bar downward while turning the top of the bar toward the frame, and remove it toward the right and downward.

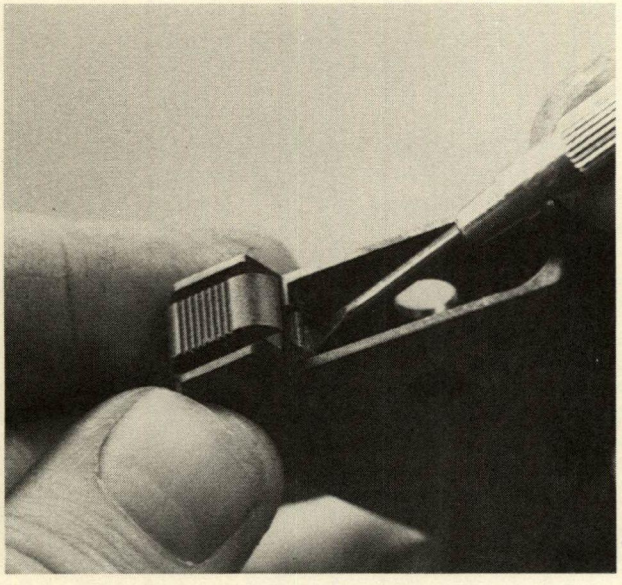
9. Depress the rear of the trigger guard upward, and push out the guard hinge pin toward either side. **Caution:** *This is a strong spring, so control it.* Remove the guard, plunger, and spring downward.

10. The small pin rearward of the guard pin retains twin levers which prevent movement of the guard when the magazine is in place. The levers are removed rearward, into the magazine well.

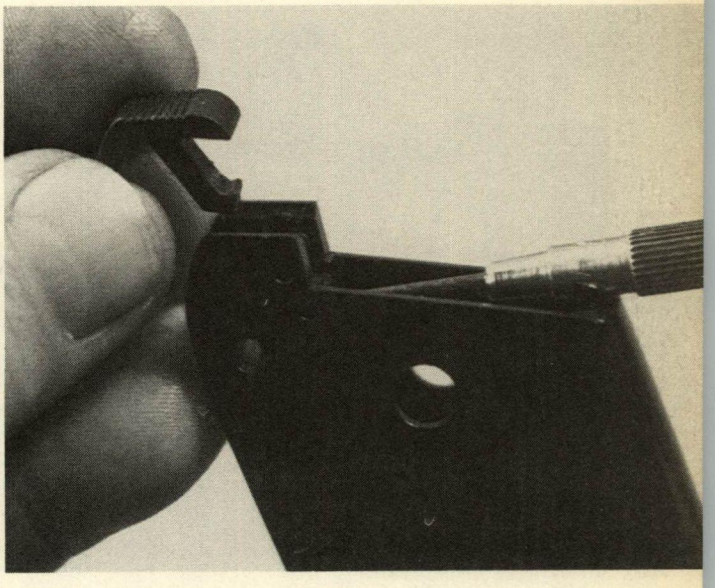


11. Drifting out the trigger cross-pin will release the trigger and its spring for removal downward.



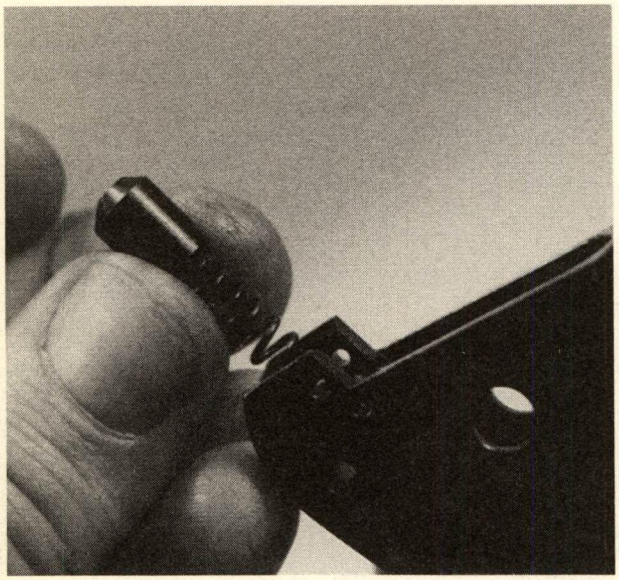


12. With the hammer in the fired position, insert a small screwdriver inside the magazine well at the rear, and set its blade between the top of the magazine catch and the lower plunger of the hammer spring. Depress the plunger upward, and move the screwdriver toward the rear, pushing the magazine catch off its shelf.

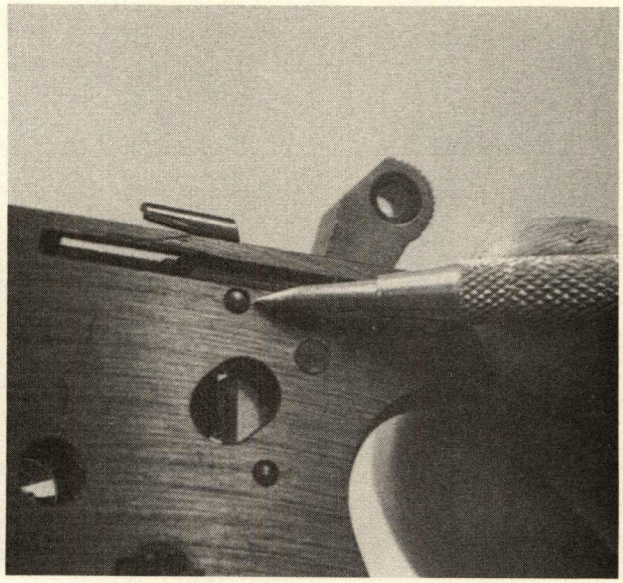


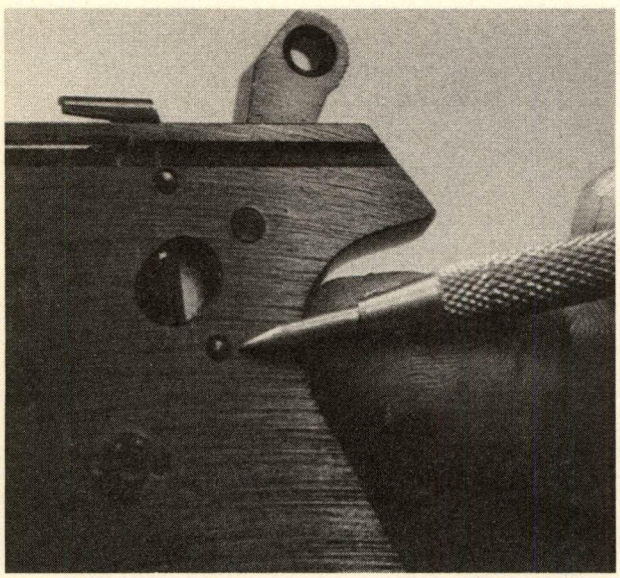
13. The screwdriver will capture the plunger and spring, and the magazine catch will be released for removal downward. **Caution:** *Do not withdraw the screwdriver at this point.*

14. Hold a shop cloth over the end of the frame, or rest it squarely against the edge of the workbench, and withdraw the screwdriver. Remove the plunger and hammer spring downward. **Note:** If you have a later-production TPH, it will be necessary to drift out the two cross-pins at the lower rear of the grip frame before the spring and plunger can be removed. The same cautions apply.

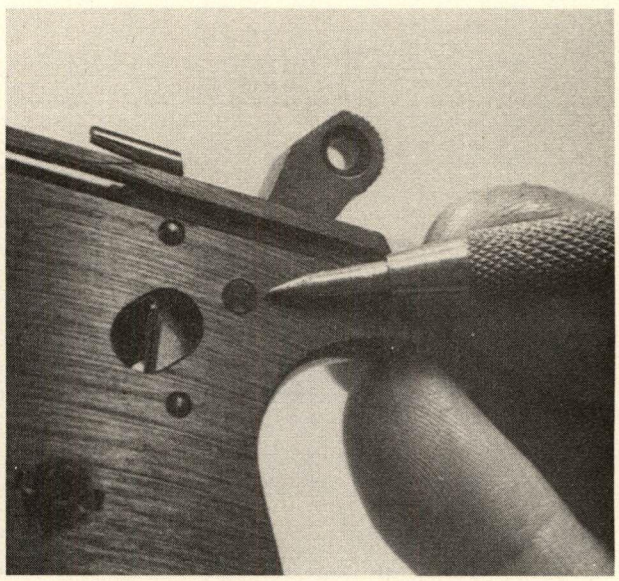


15. Drifting out the small cross-pin at the top of the frame will release the ejector, insert block, and sear trip for removal upward. **Caution:** *When this pin is removed, the sear spring will be released into the magazine well, so insert a shop cloth into the magazine well to catch the spring.*



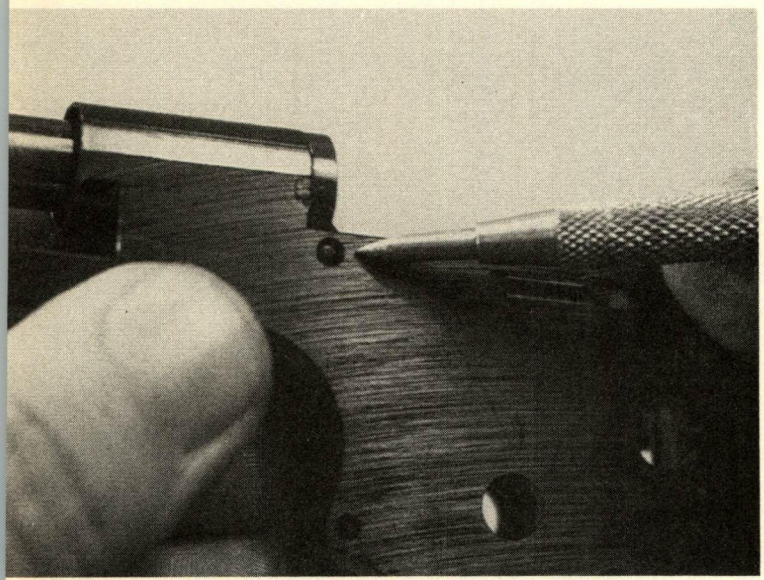


16. Drifting out the lower small pin will release the sear for removal forward, into the magazine well.



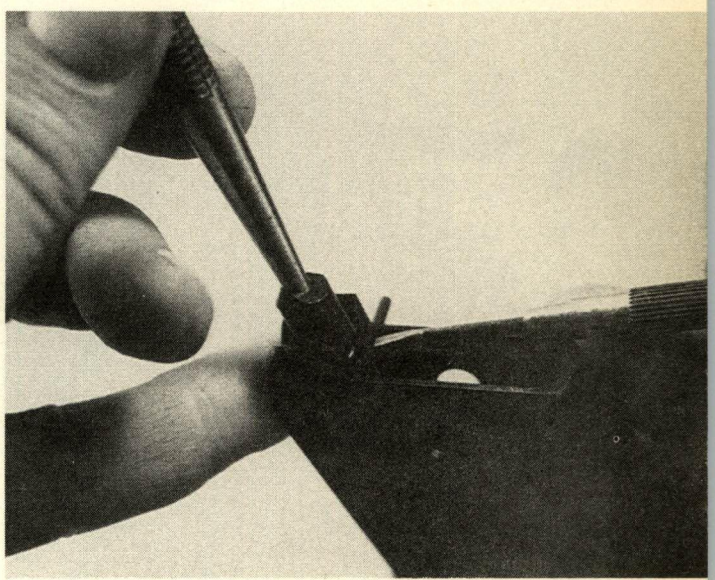
17. Drifting out the hammer cross-pin will allow removal of the hammer and hammer strut upward.

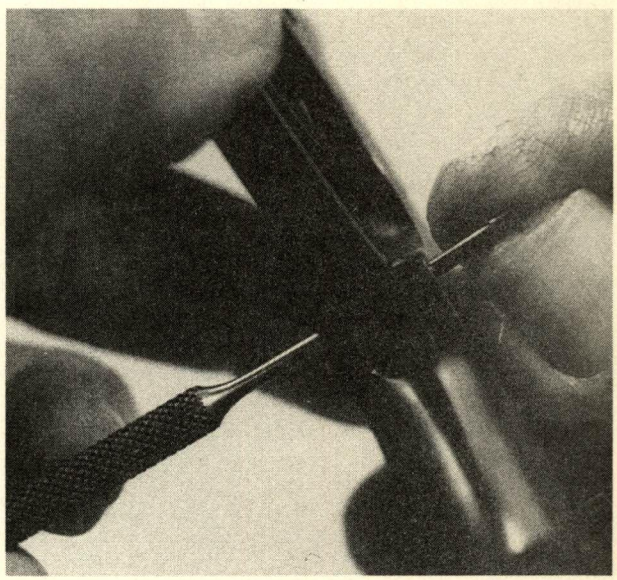
18. The barrel is cross-pinned to the frame. After removal of the pin, the barrel is pushed out toward the rear. In normal takedown, it should not be disturbed.



Reassembly Tips:

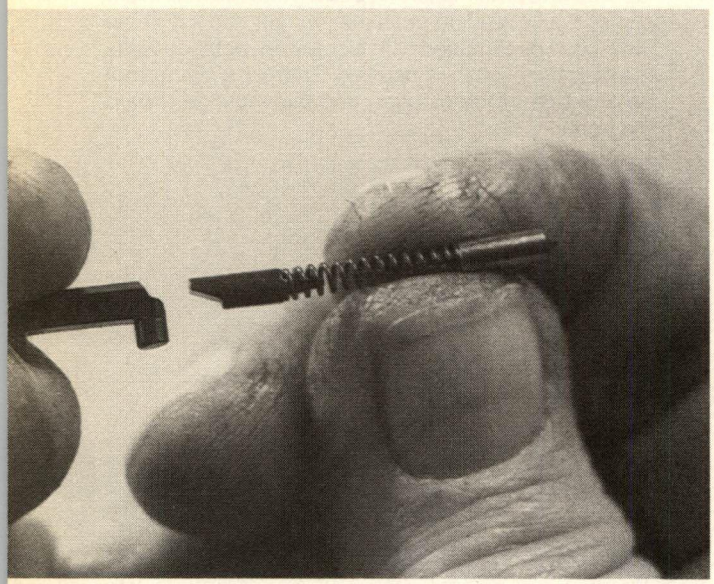
1. When replacing the hammer spring and its plunger, be sure the top of the spring encloses the lower shaft of the hammer strut. This engagement is visible through a hole in the right side of the frame. Insert a tapered drift punch (starting punch) into the hole in the plunger, and use it to push the plunger into the frame until it can be detained with a screwdriver blade while the magazine catch is installed. There is a slanted cut on one side of the plunger, and this must go toward the front.



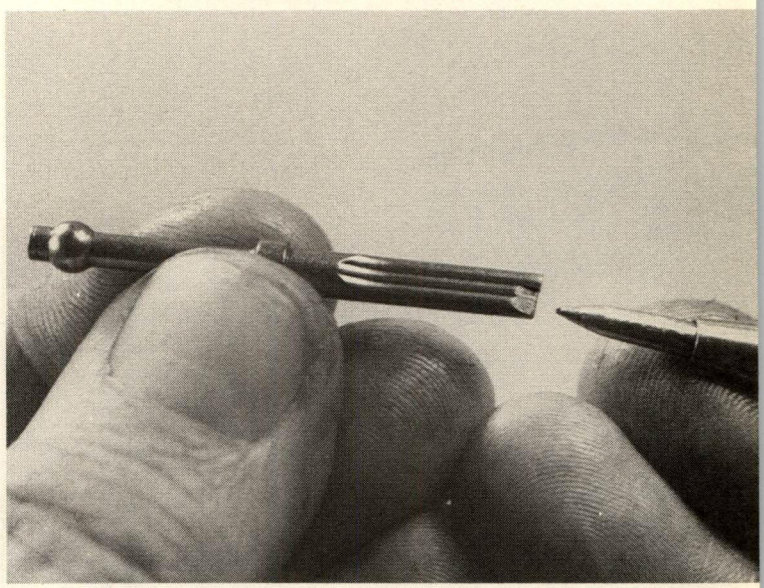


2. When replacing the trigger guard assembly, insert a drift punch to hold it in place while installing the cross-pin.

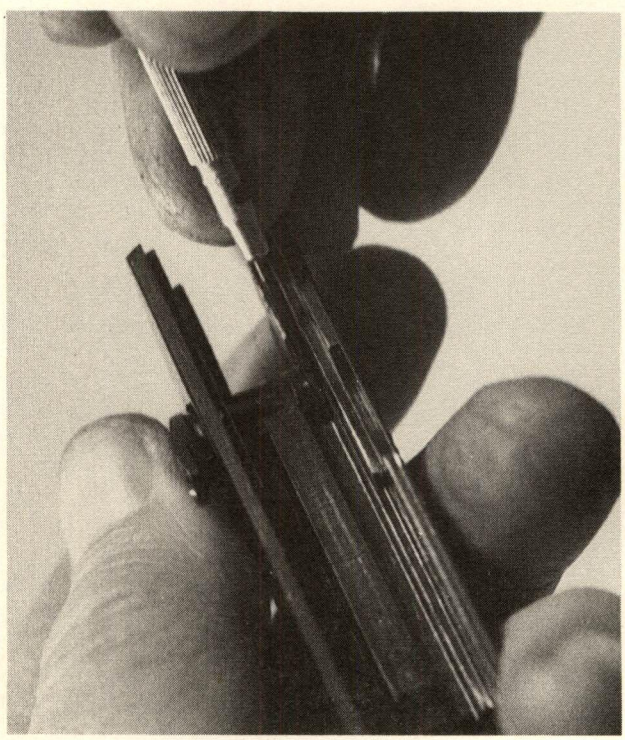
3. When replacing the extractor, note that the extractor plunger is shelved at the front, and be sure it is installed so it engages the extractor as shown.



4. When replacing the firing pin, note that its forward end has a narrowed, wedge-shape on one side, and this must be oriented downward.



5. When replacing the safety, insert a small screwdriver on the right side to compress the plunger toward the front as the safety is pushed into place.



Index/Cross-Reference

A

Action Arms AT84 213
Action Arms AT88 213
AMT Combat Government Model 160
AMT Hardballer 160
AMT Long Slide 160
AMT Skipper 160
Argentine Model 1927 160
Armi Galesi Model 9 223
Astra Camper 21
Astra Constable 15
Astra Cub 22 and 25 21
Astra Model 300 28
Astra Model 400 28
Astra Model 600 28
Auto-Ordnance M1911A1 Pit Bull 160
Auto-Ordnance M1911A1 Thompson 160

B

Bauer 25 35
Benelli B76 41
Benelli B77 41
Benelli B80 41
Benelli MP-3 41
Beretta Cougar 86
Beretta Model 1931 86
Beretta Model 1932 86
Beretta Model 1934 86
Beretta Model 1935 86
Beretta Model 81 49
Beretta Model 84 49
Beretta Model 85 49
Beretta Model 87 49
Beretta Model 90 59
Beretta Model 92 64
Beretta Model 92F 64
Beretta Model 92S 64
Beretta Model 92SB 64
Beretta Model 92SBC 64
Beretta Model 950 73
Beretta Model 950B 73
Beretta Model 950BS 73
Beretta Model 951 79
Beretta Puma 86
Bersa Model 223 91
Bersa Model 224 91
Bersa Model 225 91
Bersa Model 226 91
Bersa Model 323 91
Bersa Model 383 91
Browning "Baby" 25 35
Browning BDA 380 118
Browning BDA 45 110
Browning Buck Mark 100
Browning Buck Mark Plus 100
Browning Buck Mark Silhouette 100
Browning Buck Mark Varmint 100
Browning Challenger 100
Browning Challenger II 100
Browning Challenger III 100
Browning Hi-Power(P-35) 130
Browning Medalist 100
Browning Nomad 100

C

Chinese M20 368
Chinese Type 51 368
Chinese Type 54 368
Colt 32 Pocket Auto 146
Colt Challenger 153
Colt Combat Commander 160
Colt Combat Elite 160
Colt Combat Grade Government 160
Colt Commander 160
Colt Delta Elite 160
Colt Gold Cup 160
Colt Gold Cup 38 Special 160
Colt Government Model 380 139
Colt Huntsman 153
Colt Junior 21
Colt Lightweight Commander 160
Colt Mark IV Series 70 160
Colt Mark IV Series 80 160
Colt Match Target 153
Colt Model 1911 160
Colt Model 1911A1 160
Colt Mustang 139
Colt Mustang Plus II 139
Colt Mustang Pocket Lite 139
Colt National Match 45 160
Colt Officers ACP 160
Colt Pocket Auto First Issue 146
Colt Pocket Auto Second Issue 146
Colt Pocket Auto Third Issue 146
Colt Super 38 160
Colt Targetsman 153
Colt Woodsman 153
Colt Woodsman (first issue) 153
Colt Woodsman (second issue) 153
Colt Woodsman (third issue) 153
Colt Woodsman Sport (first issue) 153
Colt Woodsman Sport (second issue) 153
Colt Woodsman Target 153
Coonan Model A 171
Coonan Model B 171
CZ Model 1922 179
CZ Model 1924 179
CZ Model 1945 189
CZ Model 27 179
Czech CZ75 213

D

Desert Eagle 194
Detonics Combat Master Mk. I 160
Detonics Combat Master Mk. VI 160
Detonics Scoremaster 160

E

Essex Model 1911A1 160
Excam TA90 213
Excam TA90 Baby 213
Excam Targa GT27 206
Excam Targa GT32 206
Excam Targa GT380 206

F

F.I.E. "The Best" 21
F.I.E. Super Titan II 206
F.I.E. Titan E27 25 ACP 206
F.I.E. Titan II 206
F.I.E. TZ75 213
F.I.E. TZ75 Series 88 213
Falcon Portsider 160

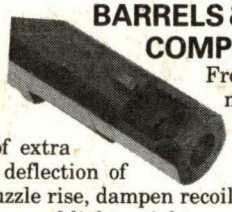
Federal Ordnance Ranger M1911A1 160
FI Model D 266
Fraser 35
G
Galesi 25 223
Glock 17 227
Glock 17L 227
Glock 19 227
H
Heckler & Koch P7 236
Heckler & Koch P7M8 236
Heckler & Koch P7M13 236
Helwan 9mm 79
Hi-Standard Olympic ISU 248
Hi-Standard Sharpshooter 248
Hi-Standard Supermatic 248
Hi-Standard Supermatic Citation 248
Hi-Standard Supermatic Citation Military 248
Hi-Standard Supermatic Standard Citation 248
Hi-Standard Supermatic Tournament 248
Hi-Standard Supermatic Trophy 248
Hi-Standard Supermatic Trophy Military 248
Hi-Standard Victor 248
Hungarian M48 368
I
Interdynamic KG-99 257
Intratec TEC-9 257
Intratec TEC-9M 257
Intratec TEC-9MS 257
Intratec TEC-9S 257
J
Iver Johnson Model X300 Pony 266
L
Llama Model IIIA 160
Llama Model IXA 160
Llama Model VIII 160
Llama Model XA 160
Llama Model XI 160
Llama Model XV 160
Luger (Pistole Parabellum) 272
M
M-S Safari Arms Enforcer 160
M-S Safari Arms Model 81 160
M-S Safari Arms Model 81 BD 160
M-S Safari Arms Model 81 BP Super 160
M-S Safari Arms Model 81NM 160
MAB Model PA-15 279
Manurhin PP 466
Manurhin PPK/s 466
Mauser 1896 295
Mauser Model 1910 304
Mauser Model 1934 304
Mauser Model HSc 288
N
Nambu Type 14 313
Nambu Type 94 320
Norinco Type 54-1 368
O
Olympic/Safari Arms Enforcer 160
Olympic/Safari Arms Matchmaster 160
Ortgies 325
P
PSP-25 35
R
Radom P-35 331
Randall Compact Service Model 160
Randall Curtis LeMay Four Star 160
Randall Raider 160
Randall Service Model 160
Raven MP-25 343
Raven P-25 343
Ruger Mk. I 361
Ruger Mk. II 361
Ruger Mk. II Bull Barrel 361
Ruger Mk. II Government Model 361
Ruger Mk. II Target 361
Ruger P-85 349
Ruger Standard Auto 361
Russian Tokarev 368
S
Sauer Model 1913 381
Sauer Model 38H 376
Savage Model 1908 388
Savage Model 1915 388
Savage Model 1917 388
SIG/Sauer P220 110
SIG/Sauer P225 110
SIG/Sauer P226 110
SIG/Sauer P228 110
SIG/Sauer P230 396
Smith & Wesson Model 2206 420
Smith & Wesson Model 39 403
Smith & Wesson Model 3904 429
Smith & Wesson Model 3906 429
Smith & Wesson Model 422 420
Smith & Wesson Model 439 411
Smith & Wesson Model 459 411
Smith & Wesson Model 4506 429
Smith & Wesson Model 4516 429
Smith & Wesson Model 469 411
Smith & Wesson Model 59 403
Smith & Wesson Model 5904 429
Smith & Wesson Model 5906 429
Smith & Wesson Model 622 420
Smith & Wesson Model 639 411
Smith & Wesson Model 645 411
Smith & Wesson Model 659 411
Smith & Wesson Model 669 411
Smith & Wesson Model 6904 429
Smith & Wesson Model 6906 429
Sportarms M213 368
Springfield Armory M1911A1 160
Springfield Armory M1911A1 Commander 160
Springfield Armory M1911A1 Compact 160
Springfield Armory M1911A1 Defender 160
Springfield Armory P9 213
Springfield Armory P9C 213
Star Model BKM 266
Star Model BM 266
Star Model DK 266
Star Model PD 440
Star Model S 266
Star Model SM 266
Steyr Model 1912 (Steyr-Hahn) 445
T
Taurus Model PT92 64
Taurus Model PT92AF 64
Taurus Model PT99 64
Taurus Model PT99AF 64
Turkish MKE 466
V
Vega 45 160
W
Walther P-38 456
Walther P-38K 456
Walther P1 456
Walther P4 456
Walther PP 466
Walther PPK 466
Walther PPK American 466
Walther Model PPK/s 466
Walther PPK/s American 466
Walther TPH 471
Y
Yugoslav M57 368

BROWNELLS

Your Source For Auto Pistol Custom Accessories And The Gunsmithing Tools You Need

100% Satisfaction Guaranteed **515-623-5401** *MC/VISA/COD Cash/Check*

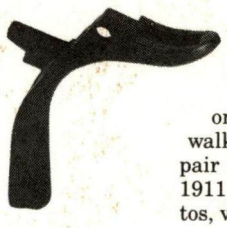
BARRELS & COMPENSATORS



From Jim Clark, the man who made "Bowling Pin" conversions famous. The combination of extra muzzle steadying weight and 45° deflection of gases work together to tame muzzle rise, dampen recoil and give faster sight recovery. Heavy and light weight version, long and short too - for 1911 Government Model, Commanders and copies. And that's just the ones from Clark!. . . We also carry Barrels and Compensators from the other famous names in the business:

WILSON ALPHA PRECISON WICHITA JARVIS

BEAVERTAIL GRIP SAFETIES



Personalize your 1911 and stop "hammer bite" with a grip safety that matches *your* hand size and shooting style. The one shown is from pistolsmith Ed Brown and features a notch for hammer clearance and a high upsweep to give maximum room for large hands. Large or small hands, Series 70 or 80, blued or stainless guns, plain steel or rubber covered - there's bound to be one that's just right for you in our catalog. Choose from all the big names:

CLARK WILSON PACHMAYR MUESCHKE KINGS

SHOP MANUAL

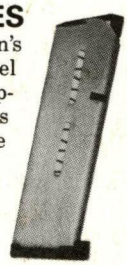
Jerry Kuhnhausen's excellent book on the Colt .45 Auto walks you through the repair and tuning of the 1911. Many superb photos, very readable text.

1911 AUTO AMBI SAFETIES

You're looking at the elegant, classic ambidexterous safety from shooter Bill Wilson. Right and left handers love its graceful curve, extra length and positive, grooved surface. If you want an extended safety that's not ambi, or an ambi that isn't extended, we have them! To go along with the extended safeties, we carry extended slide stop releases for the 1911, Browning Hi-Power and Smiths. . .from all the top names:

KINGS MUESCHKE COLT WILSON

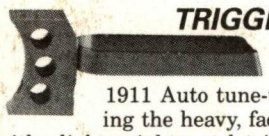
MAGAZINES



Bill Wilson's stainless steel .45 and .38 Super magazines are some of the finest you'll find. The synthetic follower won't bind and the standard base pad ensures positive seating. We carry all the top makers and a full line of traditional service magazines for the 1911 and Berretta 92 plus the super-specials with round followers, base pads and increased capacity. Try a new magazine, you'll be suprised at how many functioning problems a good magazine can cure. Brands carried include:

PACHMAYR SHOOTING STAR MAG PAK METALFORM RAMLINE

TRIGGERS



A vital part of any 1911 Auto tune-up is replacing the heavy, factory trigger with a light weight match trigger like the Videki shown here. The reduced weight means there's less mass to move and the precise bows slide smoothly through the frame. It all adds up to a lighter, cleaner trigger pull. Select a long or short trigger, made of aluminum, blued or stainless steel, or exotic materials like carbon fiber and titanium. Pick from famous brands:

PACHMAYR WILSON VIDEKI VIDEKI McCORMICK

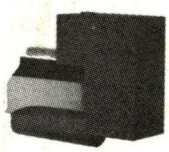
THE TRIGGER JOB IS ALMOST DONE W/PRE-CUT

HAMMERS & SEARS

Shooter/pistolsmith Chip McCormick makes the gorgeous, precise, tool steel hammers and sear shown with most of the hard work already done. The angles are all square to each other, the pin hole locations are set and the hammer hook angles are cut. All the gunsmith has to do is maintain the angles as he final fits to the gun. All the hammers we carry are lighter-than-original, "commander" style and will go a long way toward making your 1911 more pleasurable to shoot. All the best brands are here:

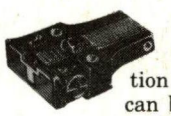
WILSON BROWN MGW McCORMICK

SIGHT STAKER



MMC's Sight Staker mounts and stakes 1911 front sights so quickly and accurately that factories have used it to assemble production guns. Complete package with mandrels, spacers and instructions. Attachments add versatility.

SIGHTS



Most production semi-auto pistols can benefit from a good set of sights - and that's the first modification most folks want. The white outline Millett sight shown is one of our most popular but there are dozens to choose from. High, fixed models, low combat adjustable, high adjustable, compact carry models and more. Front or rear, plain black, dot or line - there's sure to be one for your gun and shooting needs from famous makers like:

CLARK WILSON MMC NOVAK MGW KINGS JARVIS BROWN WICHITA

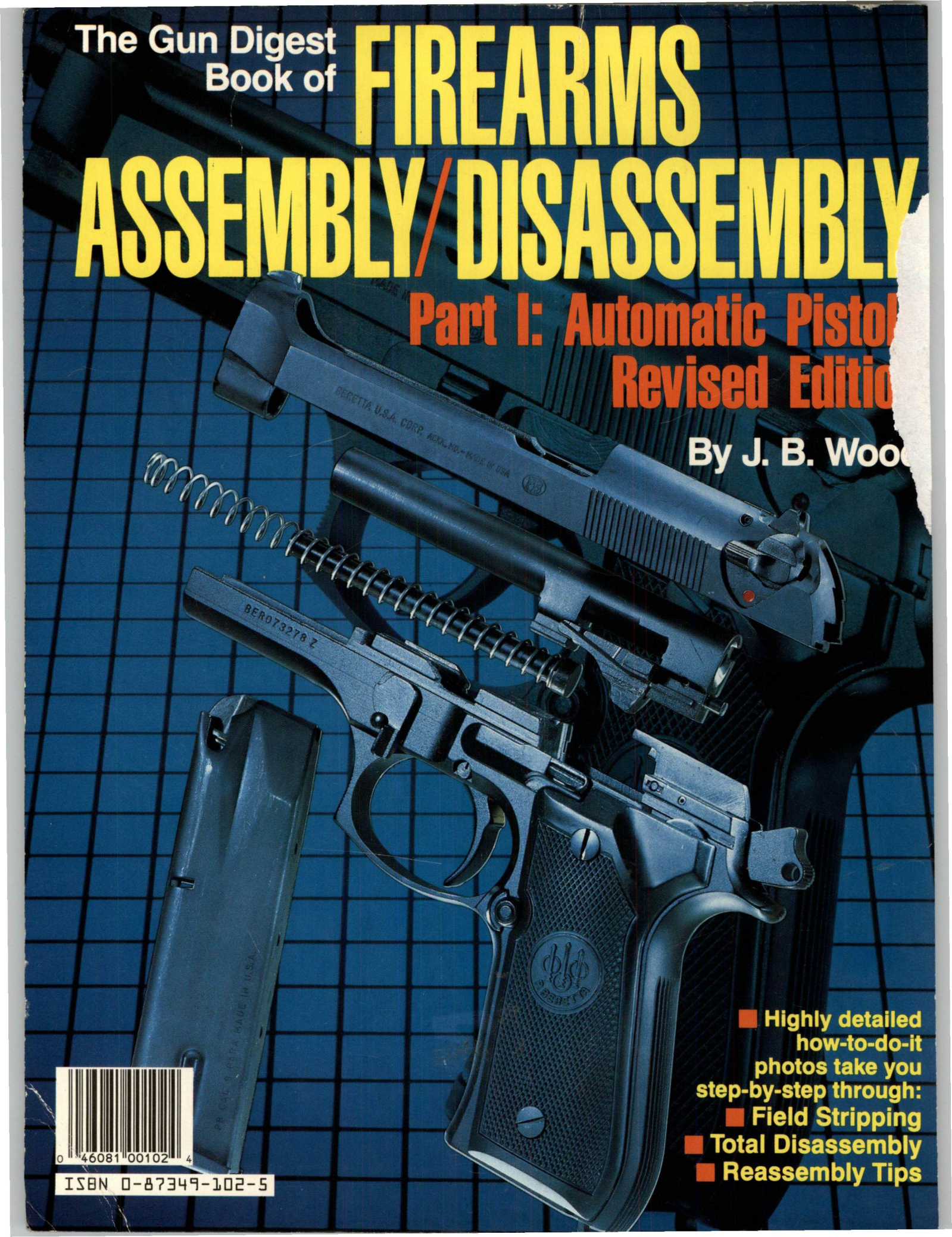
SERVICE - QUALITY - RELIABILITY - INNOVATION - GUARANTEED

Brownells Catalog - What you see here isn't everything we sell, not by a long shot! We carry **14,000** other items. . .all designed for the man who works on guns. Tools and Accessories to customize, personalize and repair Handguns, Shotguns and Rifles; Chemicals for finishing, refinishing and preserving wood and metal; and all the Gear you need to equip your shop - whether you work on guns for a living or for the shear enjoyment of it, let us be your warehouse! Our Catalog, your one-stop source for all your gunsmithing needs, is updated annually and is Free if you mention this ad.Hobbyists: Ask and we will send Federal Firearms Licensing Procedures. For the good of the entire shooting fraternity we are anxious to help you get started as a legitimate professional - full or part time. The fate of shooting in any area depends on the activity of the local gunsmith. YOU can both serve and enjoy. Call for yours today!

BROWNELLS, Inc. ROUTE 2 BOX 1 515-623-5401 MONTEZUMA, IOWA 50171

YOUR SOURCE FOR PROFESSIONAL GUNSMITHING TOOLS & SUPPLIES

FAX MACHINE # 515 623 3896


The Gun Digest Book of
FIREARMS ASSEMBLY/DISASSEMBLY
Part I: Automatic Pistol
Revised Editio
By J. B. Woo
BERETTA U.S.A. CORP. ACCN. NO. - MADE IN USA
BER073278Z
■ Highly detailed how-to-do-it photos take you step-by-step through:
■ Field Stripping
■ Total Disassembly
■ Reassembly Tips
0 46081 00102 4
ISBN 0-87349-102-5